VERTICAL™

Xcelerator IP

Administrator Manual

Issue	Release Date	Changes	Page
1.0	3-07	Initial release	--

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Contents

1 Introduction

Product Description 1-3
Interface Support 1-3
Terminal Support 1-3
Office Location Diagrams 1-4
Product Summary 1-5
TCP/IP Protocols 1-5
IP Address Assignment 1-5
Routing 1-5
Virtual Server 1-5
QoS 1-6
VoIP Protocols 1-6
IP Trunk 1-6
Digital Audio 1-7
Security 1-7
Configuration Management 1-7
Radio - WLAN 1-7
Remote Diagnostic 1-8
Physical Interfaces 1-8
Power Requirement 1-8
Operating Environment 1-8
Physical Specification 1-8

2 Installation

Hardware Components 2-3
System Specifications 2-3
Gateway/Router 2-4
Using the Wizard Program 2-6
Setup Wizard 2-6

3 System Functions

Access Control 3-3
Answering Position 3-3
Auto Attendant & Voice Mail 3-3
Call Abandon 3-4
Call Operator (Call Attendant) 3-4
Call Routing 3-4
Caller ID 3-5
Class Of Service (COS) 3-5
Day & Night Service Mode 3-5
Daylight Saving Time 3-5
Default Set 3-5
Direct Inward System Access (DISA) via Auto Attendant 3-6
Dynamic DNS 3-6
Extension Password 3-6

Fax/Modem 3-6
Feature Key Programming 3-6
Flash - Analog Port (SLT) Flash Recognition 3-6
Gateway to Gateway 3-7
IP Trunk 3-7
Line Group Assignment 3-7
Make an Outside Call 3-7
Message Waiting Indication 3-7
Multi-Line Appearance 3-8
Music On Hold 3-8
Numbering Plan 3-8
Paging 3-8
Plug & Play 3-8
Polarity Reversal (PR) Detection 3-8
PSTN Backup 3-9
Registration 3-9
Remote Management via PC 3-9
System Time & Date 3-9
Toll Restriction 3-9
Transfer 3-9
Trunk Group 3-10
Wizard Setup 3-10

4 Phone Features

Comparing SIP Phone Features 4-3
Alphanumeric Display 4-4
Answer a Call 4-4
Auto Answer 4-4
Basic Call 4-4
Call Forward via Auto Attendant 4-5
Direct Call Forward 4-5
Busy Call Forward 4-5
No Answer Call Forward 4-5
Direct Call Forward to VM 4-5
Call Log 4-6
Call Waiting 4-6
Caller Blocking 4-6
Caller ID 4-6
Conference 4-7
COS Following 4-7
Distinctive Ringing 4-7
Do Not Disturb (DND) via Auto Attendant 4-8
Feature Key Programming 4-8
Hold/Resume/Navigation in Calls 4-8
Last Number Redial (LNR) 4-9
LCD & Interactive Buttons 4-9
Mute 4-9
On Hook Dialing 4-9
Page Allow/Deny 4-9

Phone Book 4-10
Place a Call 4-10
Register to a Server 4-10
Speakerphone/Headset/Handset 4-11
Speed Dial 4-11
Transfer 4-11
Blind Transfer 4-11
Supervised Transfer 4-12
Voice Mail Access 4-12
Volume Control 4-12

5 Xcelerator IP Configuration

System Setup 5-3
Xcelerator IP Default Settings 5-3
Establishing a Connection 5-3
Device Info (System Status) 5-4
Advanced Settings 5-5
Wireless Settings 5-18
Voice Settings 5-24
Management Settings 5-44
Diagnostic Information 5-53

A System Prompts & Recordings

Xcelerator IP Voice Prompts A-3
Preset Voice Prompts A-3
Recording Voice Prompts A-7

B Numbering Plan

Xcelerator IP Default Values B-3

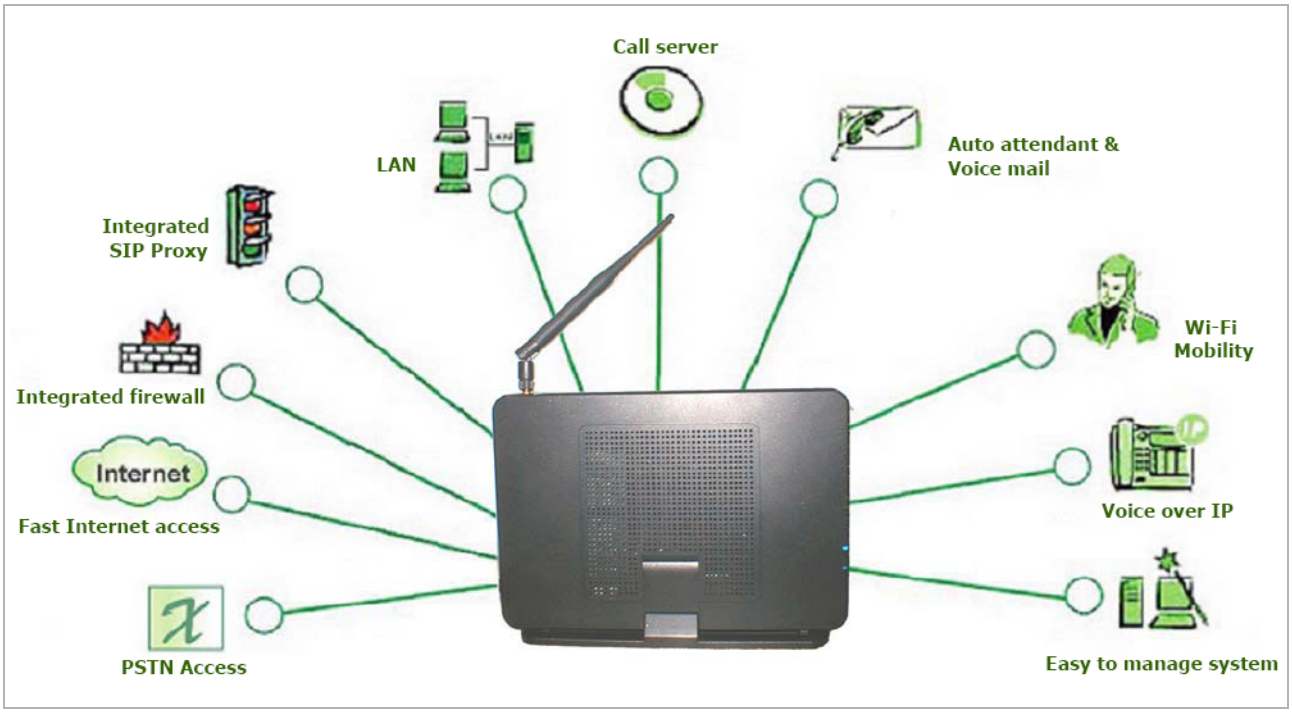
1 Introduction

The *Introduction* chapter describes the *Xcelerator IP* system and provides a summary of its many features. This information also include the protocols used to access the Internet for delivering voice/data solutions.

Product Description

The VERTICAL *Xcelerator IP* is an integrated gateway device that provides a self-contained solution for integrated voice/data applications at small office/home locations. The *Xcelerator IP* combines a robust router/firewall with a rich voice feature suite. Also included in the system is the ability to support voice and data via an integrated 802.11G wireless interface.

Connectivity to the public network is via analog CO trunks or SIP connections. Combining the two trunking methods can provide SIP primary connections with analog fail over trunks.



Interface Support

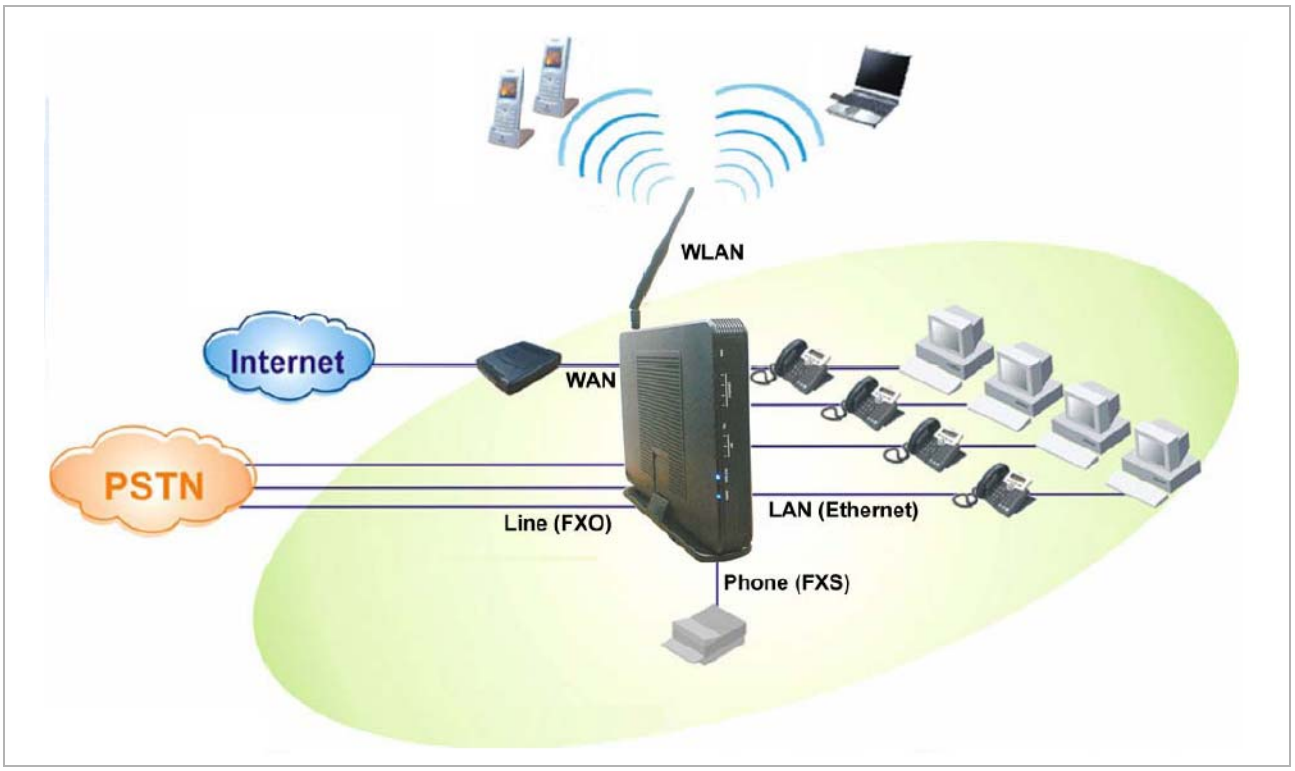
- WAN Interface: 10/100Base-T Ethernet port
- CO Interface: 3 FXO (Loop Start, for PSTN)
- Analog Device Interface: 1 FXS (for analog phone or FAX)
- LAN Interface: 4 Ethernet (10/100Base-T)
- Built-in 802.11g: Wi-Fi access point

Terminal Support

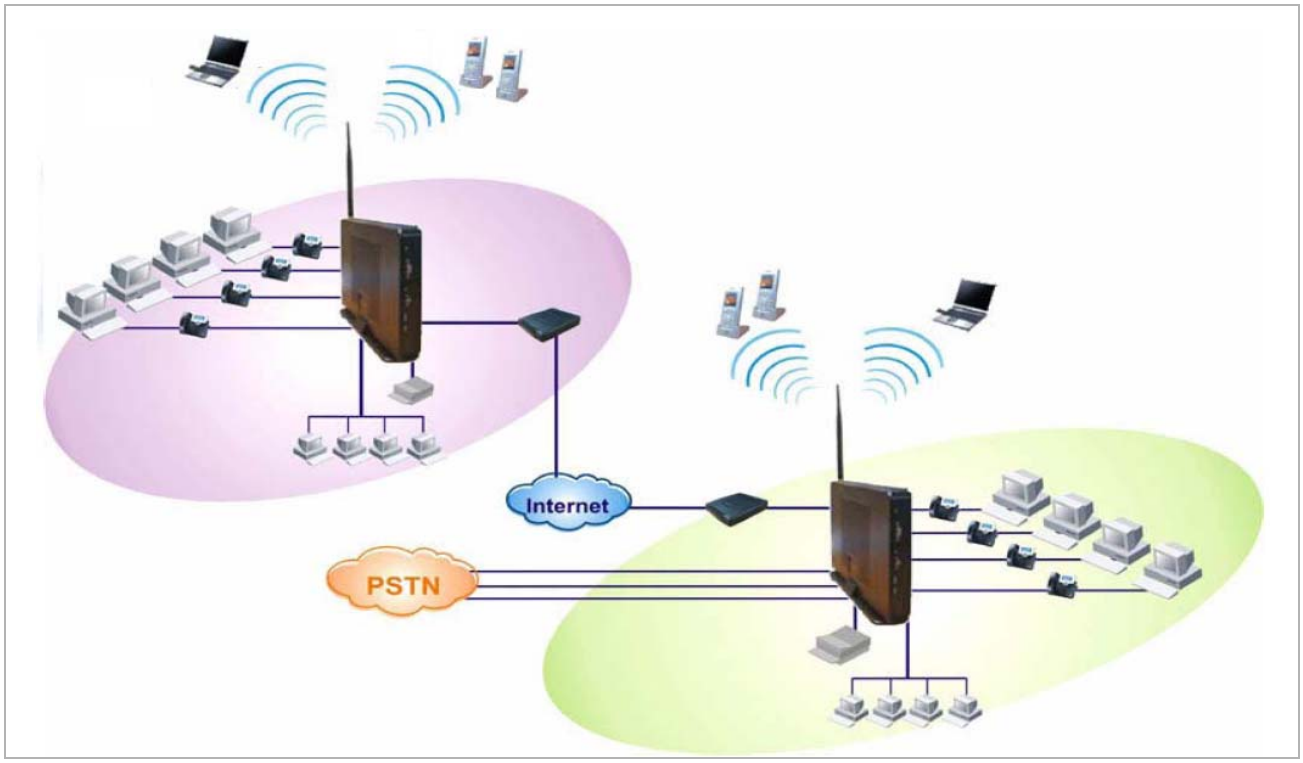
- 1 Analog Terminal
- 24 IP Stations (Wired/Wi-Fi IP Phone)

Office Location Diagrams

SMALL OFFICE Environment



OFFICE TO OFFICE Environment



Product Summary

TCP/IP Protocols

IP Protocol (RFC 791)
ARP (RFC 826) / RARP (RFC 903)
ICMP (RFC792)
TCP (RFC 793)
UDP (RFC 768)
SNTP
DNS
HTTP
Telnet
TFTP
RTP
Static Routing
NAT with ALGs

IP Address Assignment

Static
Dynamic
Subnet Mask
PPPoE Client (RFC 2516)
Primary and Secondary DNS
DHCP Server (RFC 2131-2132)
DHCP Client (RFC 2132)

Routing

RIP v1/v2
Static routing
DHCP Server/Relay/Client
DNS Relay
NAT/NAPT
IGMP Proxy

Virtual Server

Virtual Server
Port Trigger

QoS

IP ToS function (RFC 1349)
Priority queues for upstream traffic based on ToS field.
IP Precedence

VoIP Protocols

SIP (RFC 3261)
SDP(RFC2327)
Real Time Protocol (RTP; RFC 1889)
MD5 (RFC3261 HTTP) digest authentication
G.168 Echo Cancellation
Voice Codec: G.711, G.729a and G.723.1
Support FAX/modem tone detection and auto-fallback to G.711

IP Trunk

Support for up to 8 IP Trunks, which can register to an ITSP carrier.

SIP Message

Functions include:

INVITE
e-INVITE
ACK
CANCEL
OPTIONS
BYE
REGISTER
INFO
REFER
SUSCRIBE/NOTIFY
REPLACE (messages)

SIP Outbound Proxy, SIP Proxy and Registrar
Auto-Registration when power-on or period
Session Timer support
Support IP address, domain name, user name, display name for SIP URL

Digital Audio

Codec:
- G.711 a-law/μ-law 64Kbps
- G.729A/B (8Kbps)
- G.723.1(6.3K/5.3Kbps)

SIP Call Offer /Answer: Codec auto capacity exchange
Echo Cancellation: G.168 for each voice line
Silence Detection/Suppression
Comfort Noise Generation
Adaptive jitter buffer
Different frame size support (10,20,30,40, 50, and 60ms)
Packet loss concealment
Out-band (RFC2833) and In-band DTMF

Security

Password protected system management
User authentication for PPP (PAP/CHAP/MSCHAP)
Firewall
Packet Filtering
Access Control List
Wireless Security:
- Support WEP (64, 128-bit) encryption
- 802.1x and WPA/WAP2 authentication
- MAC Address-based access control
- WDS support

Configuration Management

LAN/WAN management via Telnet interface or Web-based browser interface
Firmware upgrade available by TFTP/ HTTP
Status display and event report from Web-based management
Settings Save and Restore
Reset to factory default

Radio - WLAN

Standard: IEEE 802.1g and 802.11b
Media Access Control: CSMA/CA with ACK
Modulation: OFDM/CCK
Frequency Range (Range depends on different country)
Output Power: 15dBm (typical)
Sensitivity: -67 (54Mbps) / -83 (11Mbps) dBm (typical)
Data Rate: 54, 48, 36, 24, 18, 12, 11, 6, 5.5, 2, 1Mbps, auto-fallback

Remote Diagnostic

Syslog
Device Diagnostic

Enables the following remote tests:

Test the connection to the local network
Connection to the Internet service provider
Status of individual PSTN Lines
Status of individual IP Trunk Lines
Status of individual VAA Lines
Status of the FXS port
Registered status of SIP Phones

Physical Interfaces

One 10/100BaseT Internet port (RJ-45) for WAN interface
Four 10/100BaseT Internet port (RJ-45) for LAN interface
One Single Line Telephone interface (RJ-11)
Three PSTN Line interface (RJ-11)
One PSTN Backup line

Power Requirement

Input: Voltage Range 90-230 VAC
Output: Linear 15V DC / 1A, 2.5mm barrel jack

Operating Environment

Temperature: 0-400 C
Humidity: 10 to 90%, non-condensing

Physical Specification

Dimension: 192(W) x 280(L) x 32(D) (mm)

2 Installation

The *Installation* chapter describes the hardware components and system specifications you will need to know, and step-by-step instructions for using the *Xcelerator IP* Wizard application to set up the system.

Hardware Components

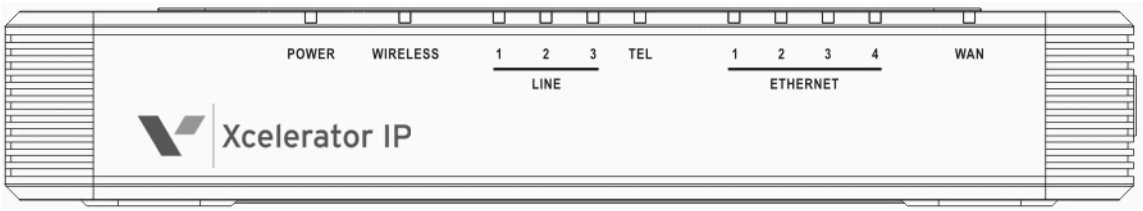
System Specifications

Feature	Description	
Main Processor	240MHZ MIPS32 CPU	
Processor SDRAM	External 32MB	
Processor Flash ROM	External 4MB	
Supplementary Processor	1x DSP Voice Pump VP101-4 (4 channel/each)	
System Flash (Voice Mail)	128MB	
Switch Controller	Broadcom BCM5325E	
System Power	15V/1A	
Standards	IEEE802.11g, IEEE802.11b, IEEE802.3	
Ports	1xWAN, 4xLAN, 1xFXS, 3xFXO	
Reset Button	Power on/off	
Cabling	RJ-45, RJ-11	
LEDs	POWER, WIRELESS, 3LINE, TEL, 4ETHERNET, WAN	
EMI/EMC	FCC Part15 Class B	
Environmental	Operating Temp:	.0ºC to 40ºC (32ºF to 104ºF)
	Storage Temp:	-20ºC to 70ºC (-4ºF to 158ºF)
	Operating Humidity:	10% to 80% relative humidity, Non-Condensing
	Storage Humidity:	10% to 90% Non-Condensing

Gateway/Router

Front Panel

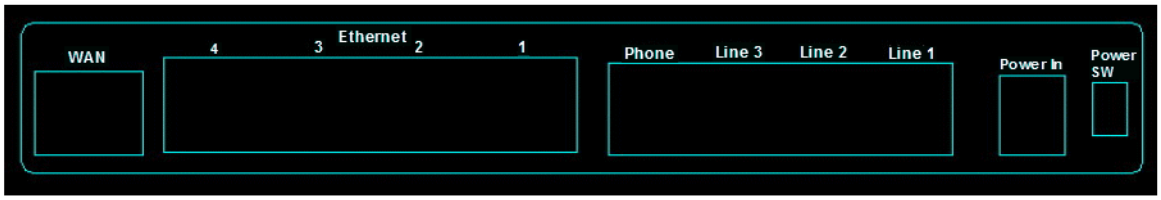
The front panel contains several LEDs that indicate the status of the unit.



LED Name	Color	Status	Description
POWER	Blue	On	Power on.
		Off	Power off.
WIRELESS	Blue	On	Wireless LAN initialization success.
		Off	Wireless LAN is not present.
LINE (1-3)	Blue	On	PSTN Line is busy.
		Off	PSTN Line is idle.
TEL (Phone)	Blue	On	Phone is busy.
		Off	Phone is idle.
ETHERNET(1-4)	Blue	On	LAN connection detected.
		Off	LAN network connection not present.
		Flashing	LAN activity present (traffic in either direction).
WAN (Internet)	Blue	On	WAN connection detected.
		Off	WAN network connection not present.
		Flashing	WAN activity present (traffic in either direction).

Rear Panel

The rear panel contains the ports for the unit's data and power connections.



Label	Function
WAN	RJ-45 connector: Connection to a cable modem or ADSL Modem which provides the interface to the public network
Ethernet 1-4 (LAN)	RJ-45 connector: Connection for local attached PC Ethernet ports or the uplink port on your LAN hub
Phone	RJ-11 connector: Connection for an analog station device (FXS port)
Line 1-3	RJ-11 connector: Connection to analog CO ports (FXO ports)
Power	Connection for supplied AC adapter
On/Off	Power switch to turn the *Xcelerator-IP* on or off

Using the Wizard Program

This Installation section will help you to install the *Xcelerator IP* quickly and easily. For more detailed instructions and further setup options, refer to *Chapter 5, Xcelerator IP Configuration*.

Setup Wizard

This system administrator can configure the *Xcelerator IP* remotely or locally via a Web Browser. When *Xcelerator IP* is set to its default factory settings, the LAN address is "192.168.1.1", the user name is "admin", and the password is "admin".

When the *Xcelerator IP* is started initially, or after being set to default configuration, the Setup Wizard will activate upon system power up. The Setup Wizard is a series of menus to assist the administrator with getting the *Xcelerator IP* up and running. The default settings for the Setup Wizard will allow the *Xcelerator IP* to be operational out of the box. For a detailed description of the Setup Wizard default settings, refer to *"Xcelerator IP Default Settings" on page 5-3*.

The Setup Wizard allows the system administrator to select the appropriate programming section(s) and configure the corresponding features. The following eight programming sections are supported.

- WAN Settings
- LAN Settings
- Wireless Basic
- Wireless Security
- Internet Time
- Numbering Plan
- IP Trunk
- Call Routing Table

In the Setup Wizard, the administrator can navigate through the various programming sections using the "Next" or "Back" buttons to choose the specific program to be modified. At the end of the programming session, the administrator will select "Exit & Reboot", at which time any changes to the system will be saved and the *Xcelerator IP* will automatically reboot. The Setup Wizard runs only on initial startup of the *Xcelerator IP*. Unless the *Xcelerator IP* is reset to its default configuration, the administrator will be pointed to the *Xcelerator IP* home page when accessing the unit.

WAN Settings

There are three modes that you can configure WAN IP address:

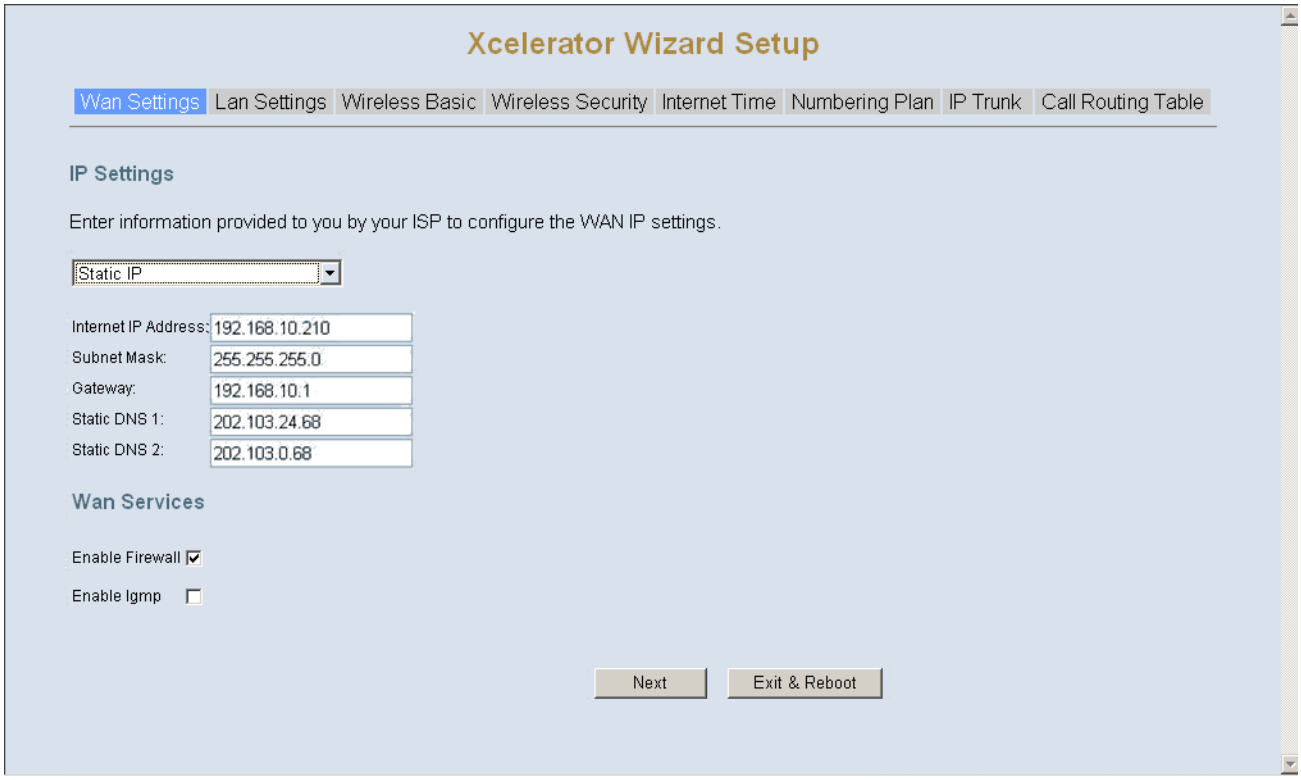
- Static IP mode
- DHCP mode
- PPPoE mode

You can also select to enable or disable Firewall and IGMP protocol settings.

Note that Network Address Translation function (NAT) is default enabled and is not showing on the page to prevent it from being disabled.

Static IP Setting

This page shows the current existing WAN interface if the system is in Static IP mode.

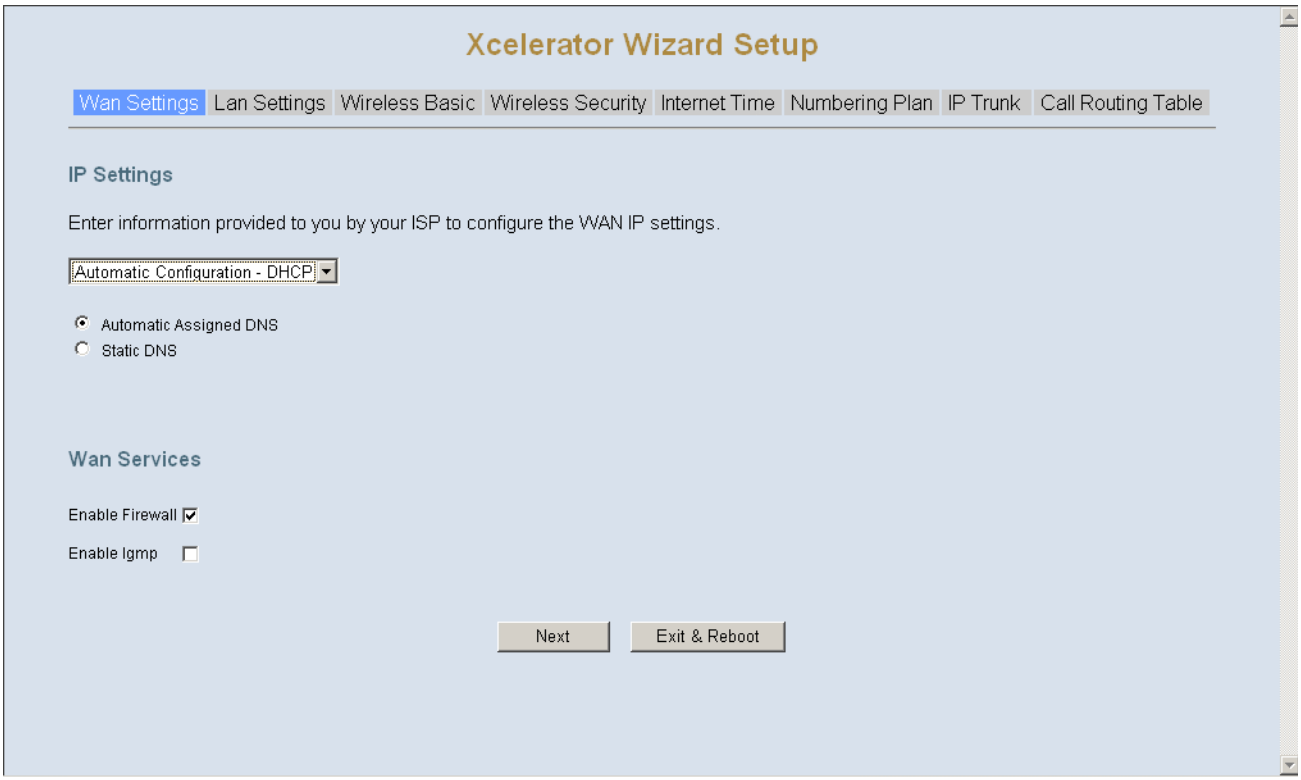


- Static IP is also called Fixed IP. Enter your assigned IP Address, Subnet Mask, and the IP Address of your gateway router provided by your ISP.
- Enter the IP addresses of your Primary and Secondary DNS Servers provided by your ISP.

Automatic - DHCP Setting

The Dynamic Host Configuration Protocol (DHCP) is an Internet protocol for automating the configuration of computers that use TCP/IP. DHCP can be used to automatically assign IP addresses, to deliver TCP/IP stack configuration parameters such as the subnet mask and default router, and to provide other configuration information.

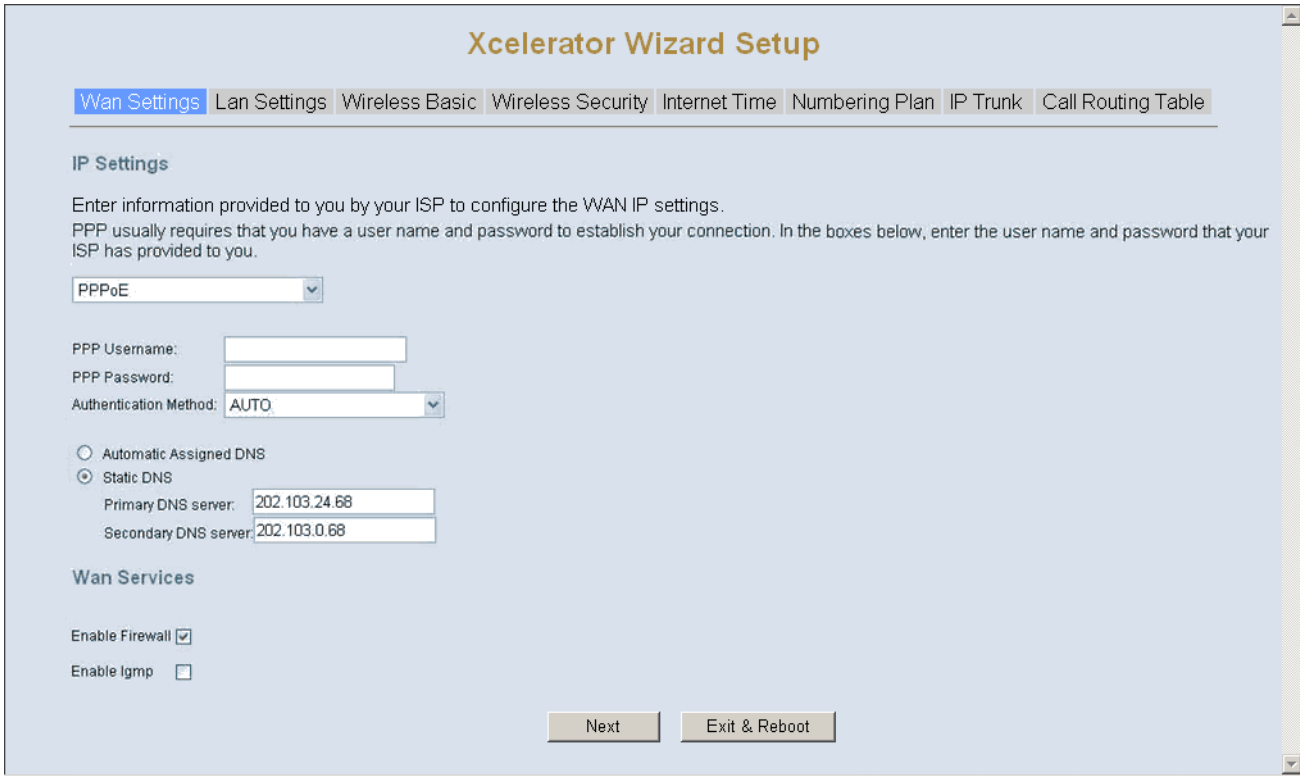
This page shows the current existing WAN interface in the system by DHCP mode.



PPPoE IP Setting

The Point-to-Point Protocol over Ethernet (PPPoE) requires a user name and password that your ISP provides for the establishment of your connection.

This page shows that the current existing WAN interface in the system is PPPoE mode. Enter the User Name and Password as provided by your ISP. These fields are case sensitive.

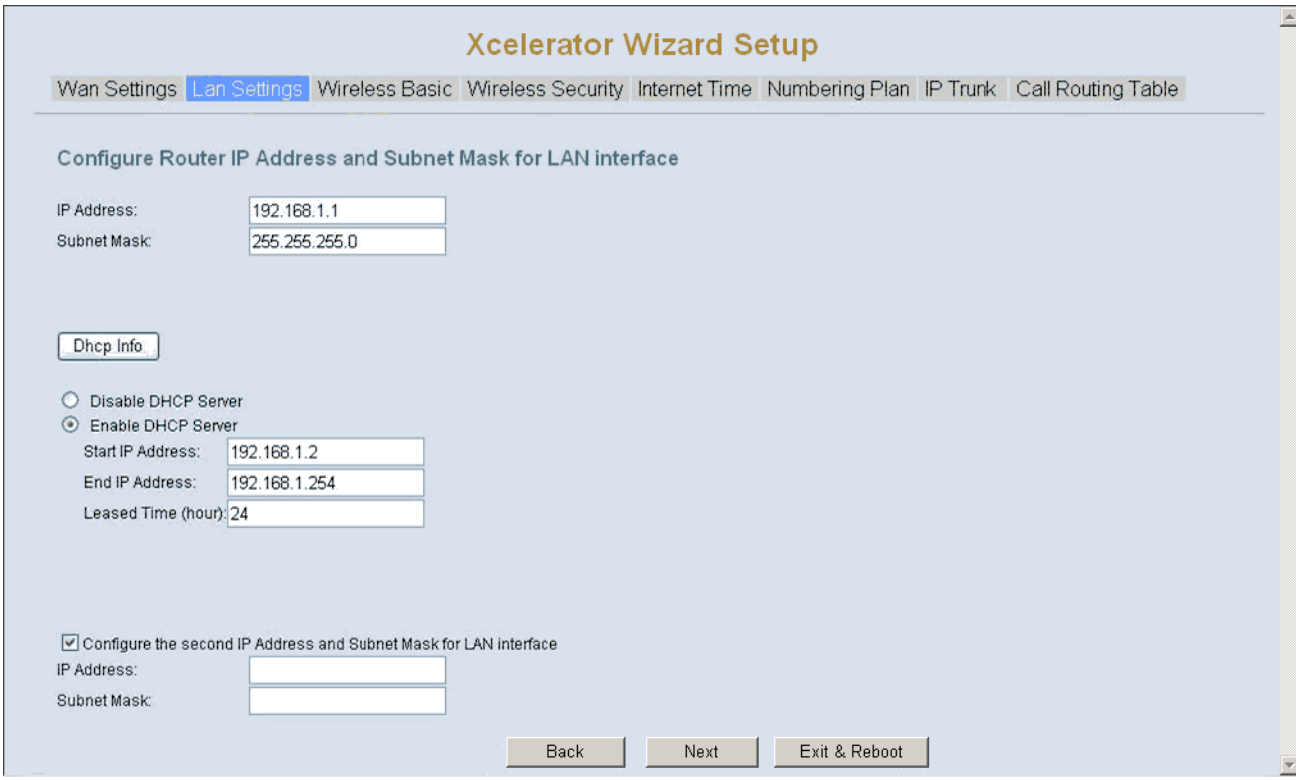


LAN Setting

The LAN settings program configures the IP address and Subnet Mask for the system LAN interface. You can also select to enable or disable DHCP Server and configure related settings for that mode.

When needed ... check the "Secondary IP" to configure the secondary IP address and Subnet Mask for LAN. This IP address is used for management only.

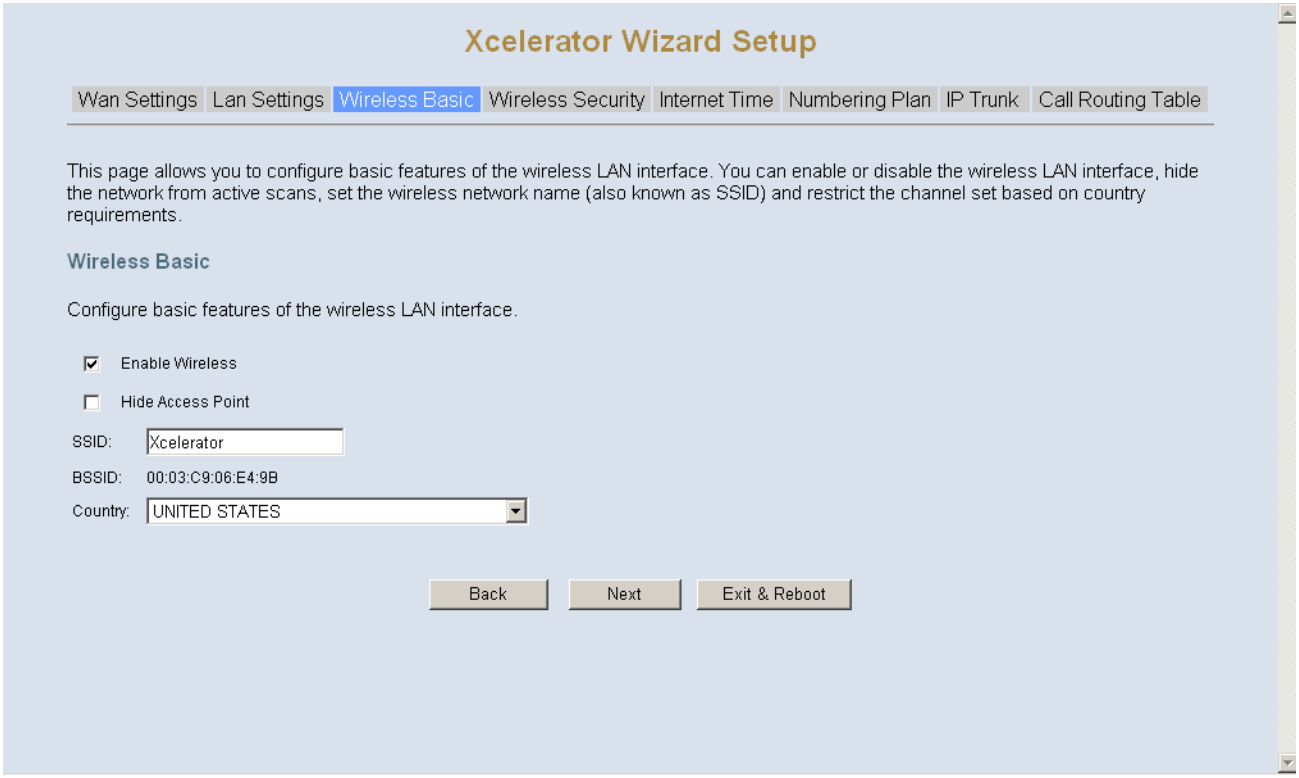
Note	*DHCP should not be used if a DHCP Server already exists in the Network.*



Wireless Basic

The Wireless Basic program allows you to configure basic features of the wireless LAN interface. You can perform the following types of functions:

- Enable or disable the wireless LAN interface.
- Hide the network from active scans.
- Set the wireless network name (also known as SSID).
- Restrict the channel set based on country requirements.



GUIDELINES

The operating distance or range of your wireless connection can vary significantly based on the physical placement of the wireless firewall. The latency, data throughput performance, and notebook power consumption also vary depending on your configuration choices.

***For best results, place your Xcelerator IP* unit:**

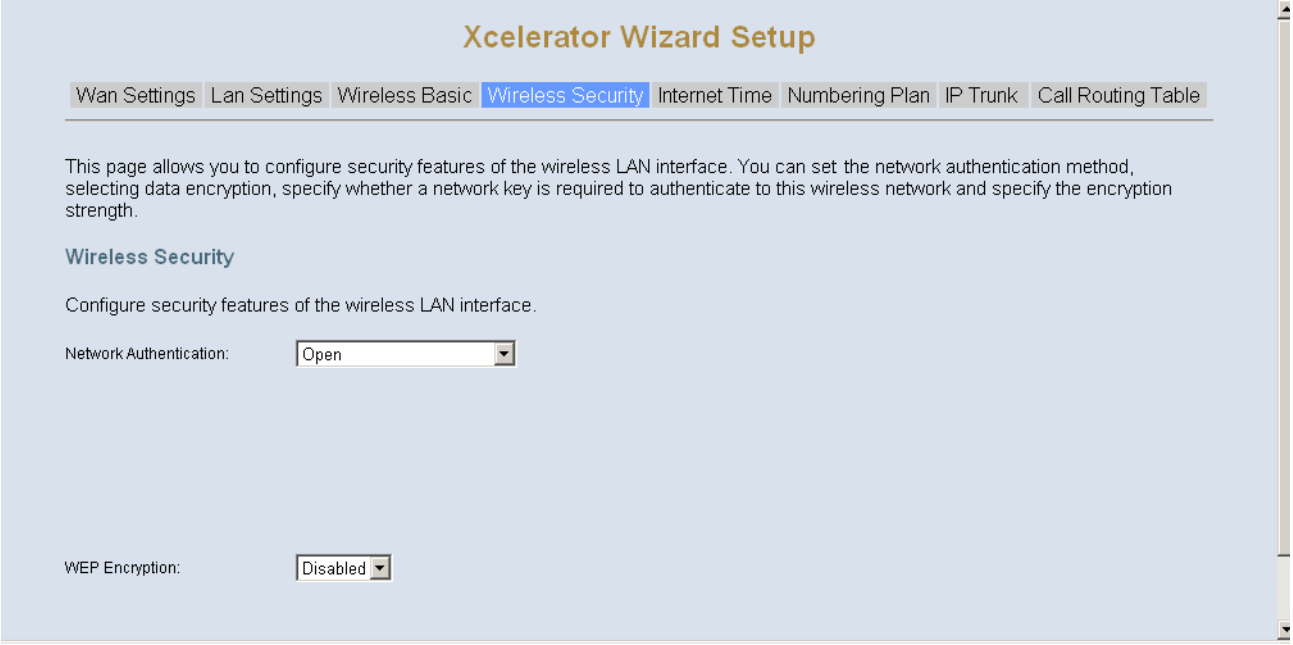
- Near the center of the area in which your PCs will operate.
- In an elevated location such as on a high shelf where the wireless connected PCs have line-of-sight access (even if through walls).
- Away from sources of interference, such as PCs, microwaves, and 2.4 GHz cordless phones.
- Away from large metal surfaces.

The time it takes to establish a wireless connection can vary depending on both your security settings and placement. WEP connections can take slightly longer to establish. Also, WEP encryption can consume more battery power on a notebook PC.

Wireless Security

The Wireless Security program allows you to configure the security features of the wireless LAN interface. You can configure the following functions:

- Set the network authorization method.
- Select data encryption.
- Specify whether a network key is required to authenticate to this wireless network, and specify the encryption strength.



Wireless Data Security Options

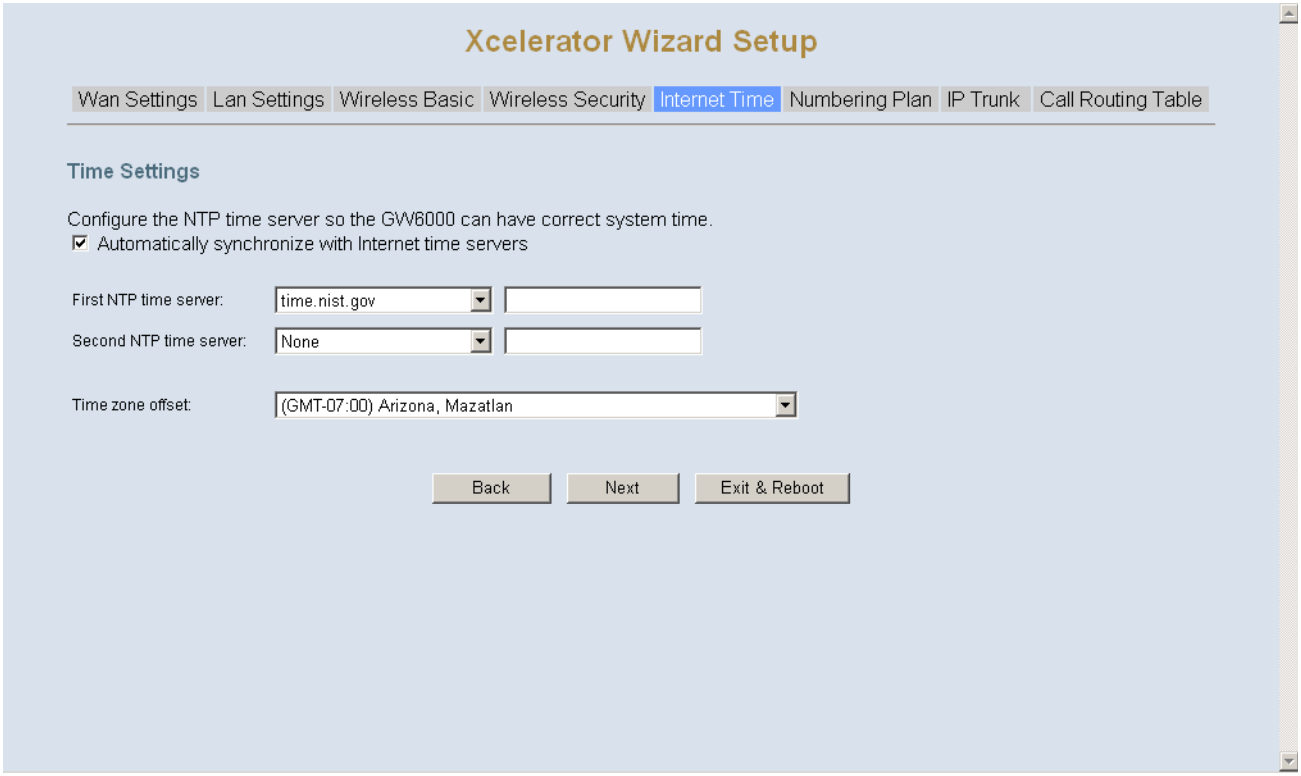
Unlike wired network data, your wireless data transmissions can extend beyond your walls and can be received by anyone with a compatible adapter. For this reason, use the security features of your wireless equipment. The *Xcelerator IP* router provides highly effective security features which are covered in Chapter 5. Deploy the security features appropriate to your needs. *For more details*, refer to *"Wireless - Security Parameters" on page 5-19*.

Restricting access by MAC address filtering adds an obstacle against unwanted access to your network, but the data broadcast over the wireless link is fully exposed.

To block a determined eavesdropper, you should use one of the data encryption options of the firewall. Wired Equivalent Privacy (WEP) data encryption provides data security.

Internet Time

The Internet Time program allows you to configure the NTP time server so that the *Xcelerator IP* system time is synchronized to a known reference clock source. This synchronization is useful for System Log data.



Numbering Plan

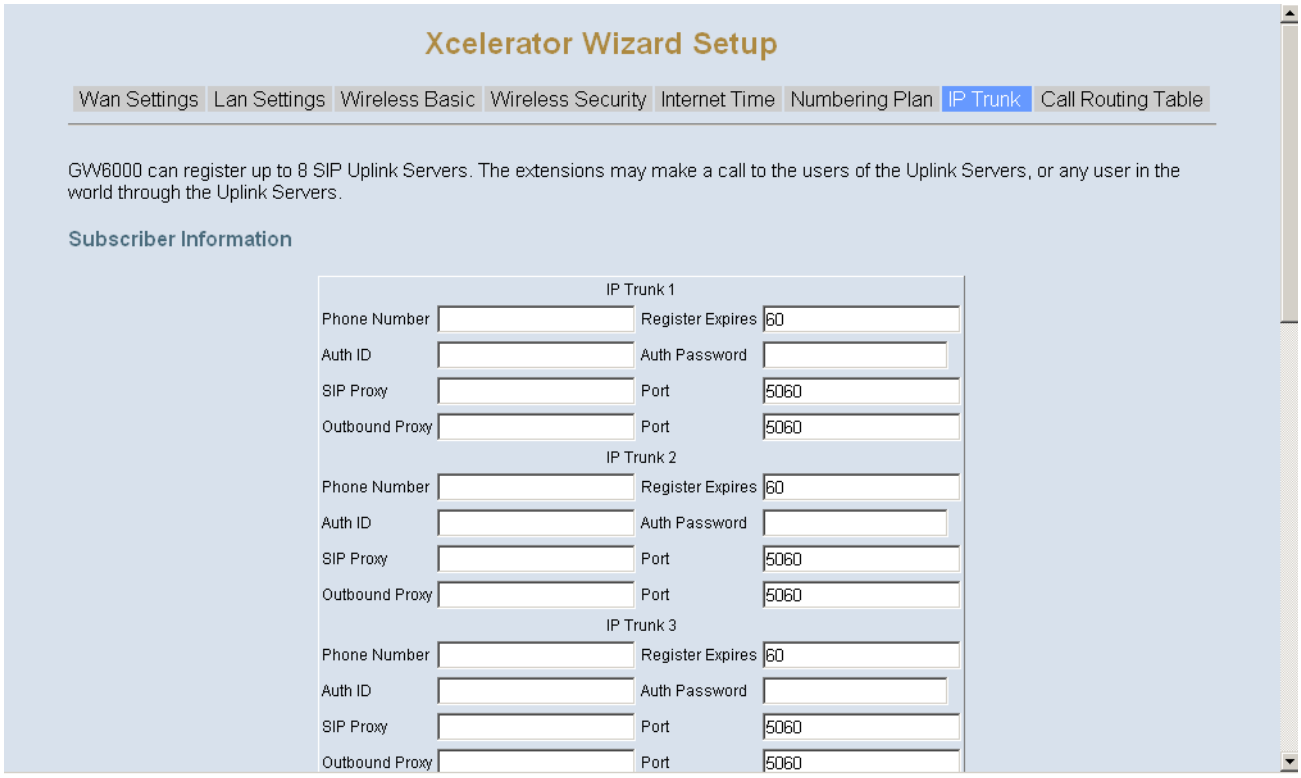
Xcelerator IP has a flexible numbering plan so that phone or trunk numbers can be customized to meet a wide range of applications. The dialed number is verified against the numbering plan to ensure there are no conflicts with other system resources.

DEFAULT Numbering

100 - 124 = IP Telephones
125 = Single Line Telephone
200 = Voice Mail Pilot Number

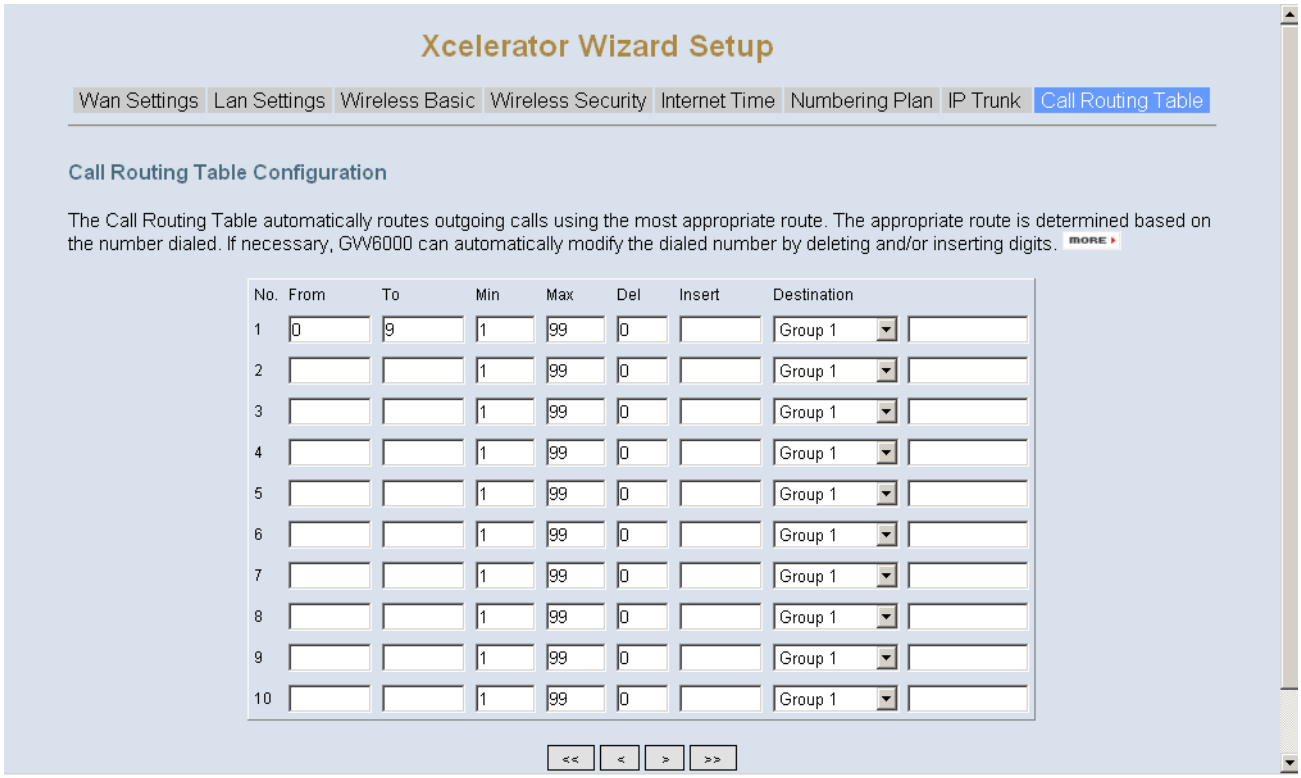
IP Trunk

Xcelerator IP can register up to 8 SIP Uplink Servers. *Xcelerator IP* user extensions may place a call to the users of the Uplink Servers, or to any user in the world through the Uplink Servers.



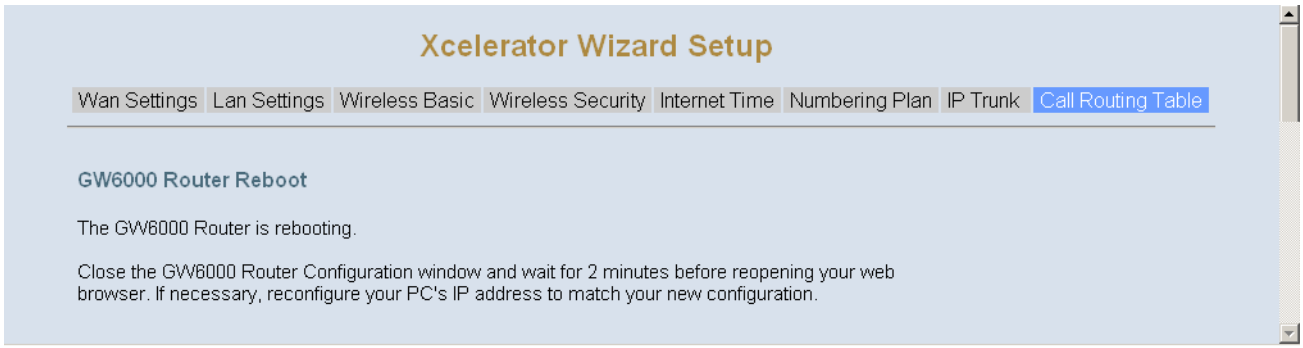
Call Routing Table

The Call Routing Table automatically routes outgoing calls using the most appropriate route which is based on the number dialed. If necessary, the *Xcelerator IP* can automatically modify the dialed number by deleting and/or inserting digits.



Wizard Setup Finished

When you click the “Save & Reboot” Button, the wizard setup will save your settings and the wizard setup will finish. Then the system will reboot as shown below.



The installation of the *Xcelerator IP* is now complete.

For additional details for each of these items … as well as information concerning advanced configuration & programming, refer to *Chapter 5, Xcelerator IP Configuration*.

3 System Functions

The System Functions chapter provides descriptions of the *Xcelerator IP* system features in alphabetical order.

Access Control

***Xcelerator IP* Web Page Access Control** provides access to the programming of the *Xcelerator IP* gateway. For system administration, only one user can be logged onto the system web page at any time; a second user cannot access the *Xcelerator IP* until the first user has completed their activity on the system or until the expiration of a three minute no-activity timer.

IP2007 Phone Web Page Access Control provides an external user access to the internal IP phone's Web page. There are two methods to access the IP2007:

- From the *Xcelerator IP* gateway web access, the *Registered Phone* page will list all registered phones with their IP links. Clicking a specific link will open that specific IP phone's Web page.
- By entering the user name and password of IP phone's voice mail from the IP2007 Phone Web Page log in screen. This will allow the user to connect to the IP2007 Phone administration interface.

Answering Position

For incoming calls from the Public Switched Telephone Network (PSTN) (via analog CO or FXO ports), the *Xcelerator IP* provides the flexibility to ring specific destinations. The *Xcelerator IP* also provides the ability to simultaneously ring up to 24 extensions when programmed in a Hunt Group, or the Operator in accordance with the system service mode (day or night). The user can also assign a line to ring directly to an extension. Incoming VoIP calls from a registered ITISP can be programmed and routed in the same manner as the analog CO (FXO) ports.

Auto Attendant & Voice Mail

The *Xcelerator IP* Auto Attendant can greatly enhance business productivity by providing either a full-time automated attendant to handle all incoming system calls or part-time automated attendant to handle overflow traffic. The Automated Attendant & Voice Mail Module provide 128MB of programmable voice announcements. It provides four ports to handle four (4) simultaneous callers, and the following Attendant/Voice Mail functions.

Auto Attendant Functions

The Auto Attendant provides an incoming caller with a customized welcome greeting and specific prompts that will describe the options available to the caller.

- Offers four types of main greeting messages: Day, Night, Lunchtime, and Holiday.
- Prompts the caller to:
  - Dial an extension number or operator code to reach the appropriate destination.
  - Leave a message in a particular mailbox.
  - Make an outside call (with appropriate password).
  - Set Direct Call Forward to their voice mailbox.
  - Forward incoming calls to another extension.
  - Set Do Not Disturb to stop the incoming line call from ringing.

Voice Mail Functions

All mailbox users have access to these mailbox features:

- Delete, save, or skip messages.
- Send messages to other mailbox.
- Receive message information indicating date, time, and Caller ID info, if available.
- Change personal greeting and password.
- Playback controls when reviewing messages.
- Record a temporary greeting.
- Send notification via e-mail when a message is left in the caller's voice mailbox.
- Attach a .wav file when sending notification via e-mail once a message is left in the caller's voice mailbox.
- Maximum message recording length for each call is 180 seconds.
- Total message recording time for each station is based on the number of phones connected to the system (240 minutes maximum per system).
- Saved messages will be retained for 1-7 days before being overwritten.

Voice Messages

- Support for two languages is provided for the all voice prompts.
- Administrators can record all voice prompts.
- Administrators can update/backup/delete all voice prompts from the *Xcelerator IP*.

Call Abandon

For every PSTN call, the *Xcelerator IP* monitors the call status. If the remote party hangs up, the ongoing call will be terminated.

Call Operator (Call Attendant)

One primary operator may be assigned in the system. The standard IP phone will serve as the operator telephone. When assigned as operator, this extension supports general system functions.

When an internal extension dials Operator Directory Number ("0" at default), or an outside party dials "0" when the Auto Attendant plays the Welcome message, these calls will be routed to the Operator Queue. The Operator supports a First-In-First-Out operation to service these calls. During any time the calling party is queued for the Operator, the calling party hear Music-On-Hold (if programmed).

Call Routing

The Call Routing feature automatically routes outgoing calls using the most appropriate route which is based on the number dialed. If necessary, *Xcelerator IP* can automatically modify the dialed number by deleting and inserting digits.

The call routing destination is: a PSTN or IP line, a line group, or another *Xcelerator IP*.

Caller ID

Xcelerator IP provides the ability to detect the calling party identification provided by the CO via PSTN lines or by an Uplink Server via IP trunks. This data, when received by the telephone carrier, will be displayed on all ringing IP phones or a Caller ID equipped Single Line Telephone.

Class Of Service (COS)

Xcelerator IP provides eight (8) Classes of Service (COS) for assignment of outside line dialing-privileges. Each extension may be assigned one Day-COS and one Night-COS. The Extension COS is used primarily for restriction and control of long distance dialing. COS 0 is the highest priority while COS 7 is the lowest priority.

Day & Night Service Mode

Xcelerator IP provides Day and Night settings via a Service Mode setting. Depending on the *Xcelerator IP* Service Mode settings, incoming trunk calls can be forwarded to a specific station or stations.

Daylight Saving Time

Daylight Saving Time (DST) feature supports auto adjustment for daylight saving time.

Default Set

When the feature is active, the extension will return to default settings. The following options will be effected:

- Cancel any Call Forward via AA
- Cancel DND via AA
- Set Paging Accept
- Default Feature Key Setting

Direct Inward System Access (DISA) via Auto Attendant

The current PSTN/IP lines are all DISA lines. While ringing to the Auto Attendant, the outside callers have direct access to extensions, PSTN/IP lines, Call Routing and Trunk Groups.

Dynamic DNS

Xcelerator IP support Dynamic DNS to see the DDNS host name as *Xcelerator IP*'s WAN IP address in SIP applications. The *Xcelerator IP* will have to have a static domain name for dynamic IP address.

Before using the feature, you must register any domains using Dynamic DNS on DynDNS.org or TZO.

Extension Password

All extensions of the *Xcelerator IP* have an associated User Password. Password length is system programmable from 0 to 24 characters.

Fax/Modem

Xcelerator IP supports FAX/modem tone detection and auto-fallback to G.711.

Feature Key Programming

Feature Keys can be programmed by phone users. A feature key can be programmed as one of four line appearances.

Flash - Analog Port (SLT) Flash Recognition

Flash is the momentary operation of the hook-switch at the analog device, which can be deciphered by the *Xcelerator IP* in such a way that the current call in progress is held, or placed in a status of transfer awaiting further instructions from the user.

Gateway to Gateway

A call may be placed from one *Xcelerator IP* to another *Xcelerator IP* via the Call Routing Table. The call Routing Table allows the user to make a direct call to an extension in another *Xcelerator IP*. It also allows the user to share the PSTN or IP Trunks in another *Xcelerator IP* to make an outside call.

IP Trunk

Xcelerator IP can register up to 8 SIP Uplink Servers. The extensions may make a call to the users of the Uplink Servers, or any user in the world through the Uplink Servers.

- SIP messages --> INVITE | re-INVITE | ACK | CANCEL | OPTIONS | BYE | REGISTER | INFO | REFER | SUSCRIBE/NOTIFY | REPLACE
- SIP Outbound Proxy, SIP Proxy and Registrar
- Auto-Registration when power-on or period
- Session Timer support
- Support IP address, domain name, user name, display name for SIP URL

Line Group Assignment

The *Xcelerator IP* can assign each PSTN/IP line to a specific Line Group. Each line can be assigned to only one Line Group. The Line group assignment is used for Line pool access.

Both PSTN lines and IP lines can be programmed into the same Line Group. The line access sequence will be dependant upon the access priority.

Make an Outside Call

The *Xcelerator IP* provides three methods to make an outside call:

- The extension user dials the phone number directly. *Xcelerator IP* automatically routes the outgoing call using the least expensive line via Call Routing Table.
- The extension user dials a Line number or a Line Group number first. After hearing dial tone, the user dials the phone number.
- The extension user presses a Line Key first. After hearing dial tone, the user dials the phone number.

Message Waiting Indication

When a message is left in the called party voice mailbox, the IP2007 LCD will display new voice mail information, and its voice mail LCD will flash accordingly.

Multi-Line Appearance

Xcelerator IP provides PSTN line and IP line status to the phones.

Trunk LED:

- Dark – the line is idle
- Lit – the line is in use

Music On Hold

Any PSTN/IP line calls which is placed on hold will provide music to the external calling party.

Numbering Plan

The Numbering Plan refers to the structure of dialed access to the various resources that are part of the *Xcelerator IP*. The *Xcelerator IP* provides a very flexible numbering plan for configuring the various system resources.

Paging

A Page can be initiated from any extension in the system. Dialing a Paging Group Directory number allows an extension to broadcast a page to all assigned members of the selected paging group.

Plug & Play

While connecting IP2007 phones to an *Xcelerator IP* LAN port, the IP2007 will automatically register to the *Xcelerator IP*. The IP 2007 will accept the DHCP addressing and station attributes from the *Xcelerator IP* gateway and place itself in a ready state to make and receive both internal and external calls.

Polarity Reversal (PR) Detection

When making an outgoing PSTN call, the system must know if the remote party answers the call or not (for SMDR recording purpose). If the CO provides a Polarity Reversal Detection signal, the *Xcelerator IP* can monitor the signal to determine whether the remote party answers the call or not.

PSTN Backup

In case of power failure, *Xcelerator IP* automatically switches the first PSTN line to the Single-line analog phone (SLT) port. The other PSTN lines are not supported.

Registration

The *Xcelerator IP* combines Proxy and Registrar servers in its application. For a Registrar server, it acts as the front end to the location service for a domain, reading and writing mappings based on the contents of REGISTER requests. The location service is then typically queried by a Proxy server.

Remote Management via PC

Programming the *Xcelerator IP* database is possible via a PC. The user can access the *Xcelerator IP* build-in a web server for remote administration.

System Time & Date

The *Xcelerator IP* provides a built-in time clock to track System Time for reference in certain features such as System Night Service Mode Change. This clock has the ability to automatically synchronize with network an NTP server via the Internet.

Toll Restriction

Xcelerator IP provides sophisticated monitoring of digits dialed on PSTN/IP Trunks. If a digit or range of digits dialed on a Trunk line is inconsistent with the dialing extension's COS, the call is denied. This calling COS criteria can be applied to local calls, long distance calls, and specific numbers that are considered allowed in areas where other numbers may be restricted.

Transfer

Transfer is used to deliver calls at your extension to another extension. It means that calls can be routed to *Xcelerator IP* destinations such as an extension or an outside phone number.

Trunk Group

The Trunk Group feature ia used to assign each PSTN Trunk and IP Trunk to a specific Trunk Group. Each Trunk can be assigned to only one Trunk Group. The Trunk group assignment is used for Trunk pool access. If setting some PSTN trunks and some IP trunks into the same Trunk Group, the trunk access sequence will depend on the access priority. The *Xcelerator IP* provides up to 4 Trunk Groups. All PSTN Trunks and IP Trunks are assigned to default Trunk Group 1 and PSTN Trunks have a higher access priority.

Wizard Setup

The *Xcelerator IP* has a setup Wizard that provides the system administrator with a series of step-by-step operations. The setup Wizard starts automatically when the *Xcelerator IP* is powered up for the first time, or if the system is reset to default configuration via the reset switch on the *Xcelerator IP* unit. The following programming/operation areas are supported through the setup Wizard:

- WAN Setting
- LAN Setting
- Wireless Basic
- Wireless Security
- Internet Time
- Numbering Plan
- IP Trunk
- Call Routing Table

The *Xcelerator IP* default configuration provides the user with a preset configuration that will allow the system to come online and operate once analog CO trunks are attached to the system. The system defaults are contained in the setup Wizard and are displayed in the user screen examples in the Installation section of this manual.

4 Phone Features

The *Phone Features* chapter lists the user functions in alphabetical order, and provides instructions for using each of the features available on the IP2007 telephone.

Comparing SIP Phone Features

The features shown in the following chart are supported on the Vertical IP2007 Phone and the FXS (SLT) port.

Features supported by other manufacturer's SIP phones are dependant upon their SIP integration and should be consulted for specific compatibility. The information on this chart reflects *Xcelerator IP* support for standard SIP features and does not imply support for any SIP phones not specifically supported by Vertical Communications.

Comparison Chart

Feature	IP 2007	FXS	Other SIP Phones
Alphanumeric Display	Yes	*(dependant)*	*(dependant)*
Basic Call	Yes	Yes	Yes
Call Forward via Auto Attendant	Yes	Yes	No
Call Hold	Yes	Yes	Yes
Call Transfer	Yes	Yes	*(dependant)*
Call Waiting	Yes	No	*(dependant)*
Conference	Yes	No	*(dependant)*
COS Following	Yes	No	No
Distinctive Ringing	Yes	No	No
Do Not Disturb via Auto Attendant	Yes	Yes	No
External Call Forward (ECF) via Auto Attendant	Yes	Yes	Yes
Feature Key Programming	Yes	No	No
Last Number Redial	Yes	Yes	*(dependant)*
LCD & Interactive Buttons	Yes	No	*(dependant)*
Mute	Yes	No	*(dependant)*
On Hook Dialing	Yes	No	*(dependant)*
Page Allow / Deny	Yes	No	No
Phone Book	Yes	No	*(dependant)*
Phone Lock/Unlock	Yes	No	No
Speed Dial	Yes	No	*(dependant)*
Volume Control	Yes	*(dependant)*	*(dependant)*

Alphanumeric Display

The IP2007 Phone extension provides a graphic LCD that supports 64 alphanumeric characters. The LCD display is also used to provide a user interface to assist with configuration of the IP2007.

Answer a Call

There are various ways to answer an incoming call:

- Lift the handset to answer the call.
- Press the SPEAKER button to answer the call in handsfree mode.
- Press HEADSET button to answer the call in headset mode.

Auto Answer

You can use the Auto Answer function to automatically answer all incoming calls when you are busy. You can enable or disable this function through the LCD menus or via the Web. The default value is “Disabled”.

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key > ▼ key to 8. Auto Answer > ✓ for options

» *Web Menu* = Login > Phone tab > Phone Parameters ☑ Enable Auto Answer

Basic Call

To make an intercom call … dial a Station number (IP Terminal, SLT) or a Voice Mail number.

To make an outgoing call … dial a phone number. The system chooses a PSTN line or IP trunk via the Call Routing Table to dial out. If it includes * in the phone number, and the call is dialed through PSTN Trunk, the * will be interpreted as a one second pause.

-or-

Dial a PSTN, an IP Trunk or a Trunk Group number first. After hearing a dial tone, dial the phone number.

Call Forward via Auto Attendant

The Auto Attendant Call Forwarding feature reroutes incoming trunk calls from one extension to another destination. The destination of a call forward can be another extension, a voice mailbox or an outside phone number. *Xcelerator IP* supports the Call Forward functions as described in the following sections.

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key > ▼ arrow to 7. Call Forward …

» *Web Menu* = Login > Personal tab > Call Forward Settings

Direct Call Forward

Forwards all calls without regard to the extension status.

To enable … dial *21 + extension number

-or-

*21 + * + (VM PSWD) + * + external number

To disable … dial **21.

Busy Call Forward

Forwards the incoming calls if the extension is busy.

To enable … dial *22 + extension number

-or-

*22 + * + (VM PSWD) + * + external number

To disable … dial **22

No Answer Call Forward

Forwards the incoming calls if the extension does not answer the call within the No Answer Time.

To enable … dial *23 + extension number + * + Time

-or-

*23 + * + (VM PSWD) + * + external number + * + Time

To disable … dial **23

Direct Call Forward to VM

Forwards all incoming calls to your voice mailbox.

To enable … dial *24

To disable … dial **24

Call Log

The IP2007 phone can store a call log for your reference. To access your call log, use the LCD menus. There are three types of Call Logs - Missed Calls, Received Calls, or Dialed Calls. To dial from a listing, press the soft keys corresponding to the LCD menus display.

Call Waiting

If Call Waiting is enabled for a specific IP2007 station, an alert (muted ring) will be played on the called party IP2007 when a second call is received and the IP2007 is in use.

To enable Call Waiting … dial *99

If Call Waiting is disabled for a specific IP2007 station, the IP2007 will return a busy tone to any calling party while the IP2007 is in use.

To disable Call Waiting … dial **99

Caller Blocking

You can block up to 10 phone numbers from reaching you at your phone when a caller attempts to call you from one of these numbers.

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key > ▼ arrow to 15. Blocking List
» *Web Menu* = Login + Personal tab + phone number + Save Settings

Caller ID

The *Xcelerator IP*, by default, accepts Calling Party Name and Calling Party Number ID. Calling Party Name is only displayed if the Calling Party Name and Calling Party Number are entered in the IP2007 Phone Book. The Calling Party Number will be displayed if delivered from the serving CO.

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key > ▼ arrow to 12. Phone Book
» *Web Menu* = Login > Phone Book tab > enter a party's name and number in order for caller ID to display on incoming calls

Conference

The Conference feature allows the user to connect two or more parties into a single conversation.

To establish a Conference call:

1. Place an internal or external call.
2. Press the HOLD key to place the 1st party on hold.
3. Press the NAV key down arrow to place a second call on this line.
4. Dial the phone number of the 2nd party of this conference.
5. Press the CONFERENCE button to start the conference.

COS Following

You can temporarily change the individual Class of Service of each extension on a per call basis. You may want to do this when the user goes to the office of low-priority COS extension and try to make an outgoing call, the user can use the function to use their own COS.

When using the COS Following feature, the station COS change will revert to the station's original COS after a one minute idle time-out.

To set COS Following … dial *55 + (phone number) + (VM password)

Distinctive Ringing

Distinctive ring cadences can be selected allowing adjacent users to discern which extension is ringing. It also provides different ring tones for intercom and trunk calls. The default is United States.

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key + ▼ arrow to 2. Ring

» *Web Menu* = Login > Phone tab > Tones Used

Do Not Disturb (DND) via Auto Attendant

Extension users can enable DND to stop incoming PSTN or IP Trunk calls from ringing at their phone. The DND on an extension can be allowed or denied through the feature access code. *NOTE* -- If an extension has DND and Call Forward enabled at the same time, calls follow the DND.

Feature Code Access

To enable ... dial *4

To disable ... dial **4

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key > ▼ arrow to 6. DND

» *Web Menu* = Login > Phone tab > Phone Parameters ☑ Enable DND

Feature Key Programming

Feature Keys can be programmed by phone users. A feature key can be programmed for line appearance.

To program a Feature Key ... dial *70 + (Feature Key number: 1 - 4) + (PSTN, IP Trunk or Trunk Group number)

Hold/Resume/Navigation in Calls

Trunk and Intercom calls can be placed on hold at any extension. While on hold, a caller will hear Music On Hold. You will also receive a muted ring every 60 seconds on the handset/headset/speaker to remind you that there is a call on hold.

Hold a Call

After you receive a call, press the HOLD button to hold a call.

Resume a Held Call

You can resume a held call by using the soft key under the "Resume" label on the LCD. The call will return to the connected status.

Navigation in Calls

You can jump between two calls by using the navigator control key. Press the UP or Down arrow to toggle between the two calls.

For a Single Line phone:

To place a call on hold ... press FLASH then hang up (optional).

To return to the original call ... press FLASH or pick up the phone.

Last Number Redial (LNR)

The Last Number Redial feature automatically dials the last number dialed from the phone.

Press the REDIAL button to dial the last number automatically. If the phone is on hook, it will pickup in handsfree mode automatically and perform handsfree dialing.

For the Single Line phone:

Dial *8.

LCD & Interactive Buttons

The IP2007 phone is equipped with a Liquid Crystal Display to enhance features operation. The IP2007 also incorporates four-screen-prompt and interactive soft keys that simplify feature operation.

Mute

The Mute feature allows the user to disable the handset transmitter or the speakerphone microphone.

To mute the microphone during a call … press the MUTE button. The button will illuminate to indicate that the microphone has been muted.

To disable the Mute function … press the MUTE button again to re-enable the microphone.

On Hook Dialing

IP2007 phone extensions may make outgoing calls without lifting the handset and monitor the dialing status through the built-in speaker. The button lamp is lit when dialing.

Page Allow/Deny

You can block one-way pages (internal, group, and all page) over the IP phone speaker by dialing the Page Deny code.

Feature Code Access

To enable Paging … dial *99

To disable Paging … dial **99

Phone Book

The *Xcelerator IP* provides users with a Phone Book, with each entry containing a user programmed Phone Number and User Name. The phone number can be an extension number, phone number, or IP address. Up to 400 entries per station user is supported.

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key > ▼ arrow to 12. Phone Book

» *Web Menu* = Login > Phone Book tab > enter a party's name and number in order for Caller ID to display on incoming calls

Place a Call

There are various ways to place a call:

- Lift the handset and dial the number pad as a regular phone.
- Press the SPEAKER button to perform handsfree dialing.
- Press the HEADSET button to perform headset dialing.
- Press a LINE button to pickup a specific line.
- Dial directly, the phone will automatically pickup in handsfree mode and perform handsfree dialing.

Note	*To speed up the calling process … you can press the pound [#] key or the [OK] key after dialing the phone number.*

Register to a Server

The phone should be configured before it can perform some basic functions. Although the phone can make a peer to peer VOIP call (the user must remember the IP address of the called party), it is desirable to have a centralized server to provide the directory service. This server can be a soft-switch, an IP-PBX, or a simple proxy.

The server has two basic functions:

1) The first is to track active phones and their IP address.
2) The second is passing signaling messages between communication parties.

To make your phone reachable in this VOIP network, your phone has to register to the server so that when someone dials your phone number the server knows where you are and informs your IP phone that someone is calling.

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key > ▼ arrow to 16. Admin > SIP

» *Web Menu* = Login + SIP tab (refer to *"SIP Page" on page 5-10*)

Speakerphone/Headset/Handset

There are 3 major input/output devices on this phone. To switch between these devices, follow the audio path transitions described below:

Handset to Handsfree -- You are using the handset and want to switch to handsfree talking. Press the SPEAKER button, then place the handset on hook. *NOTE*: The voice will not switch to speakerphone until you place the handset on hook.

Handset to Headset -- You are using the handset and want to switch to the headset. Press the HEADSET button, then place the handset on hook. *NOTE*: The voice will not switch to headset until you place the handset on hook.

Handsfree to Handset -- You are using handsfree talking and want to switch to the handset. Lift the handset off hook and the voice will switch to handset immediately.

Handsfree to Headset -- You are using handsfree talking and want to switch to the headset. Press the HEADSET button, the voice will switch to headset immediately.

Headset to Handset -- You are using the headset and want to switch to handset. Lift the handset off hook and the voice will switch to handset immediately.

Headset to Handsfree -- You are using the headset and want to switch to handsfree talking. Press the SPEAKER button and the voice will switch to speakerphone immediately.

Speed Dial

Speed Dialing allows you to store frequently dialed numbers. You can preset 10 speed dial numbers for fast dialing. Use the following steps to use speed dial:

1. Lift the handset.
2. You will see "SPD" on the LCD menus. Press the soft key corresponding to the LCD menus display.
3. You will see "SpeedDial:_" on the LCD display. Enter a valid speed dial bin number (0-9) and the IP phone will dial out with the number that is preset in the IP phone.

Phone & Web Access

» *Phone Menu* = Left soft key to *CONFIG* > ✓ key > ▼ arrow to 13. Speed Dial

» *Web Menu* = Login > Personal tab > Speed Dial Entry Settings

Transfer

Transfer redirects a connected call. You can use a Blind or Supervised transfer method to transfer the call to an extension or an outside phone number.

Blind Transfer

While on a call:

1. Press the TRANSFER key to transfer the call.
2. Dial the desired phone number and the call will transfer automatically.
3. Hang up to release the line.

Supervised Transfer

While on a call:

1. Press the HOLD key to hold this call.
2. Press the DOWN arrow of the navigation control key to start a 2nd call on this line.
3. Dial the desired phone number. You will hear a ring back tone.
4. When the called party answers, advise them of the call being transferred.
5. Press the TRANSFER key and hang up. The Supervised Transfer is complete.

For a Single Line phone:

To Transfer a Call ... press FLASH, & dial the new number.

To Transfer Immediately ... hang up (Unscreened).

To Transfer with Consultation ... wait for party to answer, consult, & hang up (Screened).

To Abort a Transfer (if 3rd party does not answer) ... press FLASH to return to original call.

Voice Mail Access

The System Administrator must set up the Voice Mail access number on the web before a user can access their voice mailbox. You will find the "MSG number" field blank; enter an appropriate number.

If you have voice mail in your voice mailbox, you will see a voice mail icon (envelope) on the left top corner of the LCD. Press the MESSAGE button to access your voice mail.

Note	*The Total Recording Message Time for one extension depends on how many extensions are connected to the Xcelerator IP. (See current members in the Phone Extension Table.) The current Xcelerator IP configuration allows 240 minutes of recording time.* *Recording Time Per Extension = (240 minutes) divided by (Total Members)*

Volume Control

The IP2007 phone is equipped with a volume control that is used to adjust the various volume settings of the telephone. The following functions can be adjusted:

- Ringing volume level
- Handset volume level
- Speaker volume level
- Headset volume level

5 Xcelerator IP Configuration

The *Xcelerator IP* Configuration chapter shows the Web interface you will use to set up your system. Each section describes the available settings and how to define the parameters.

System Setup

Connect a PC to the *Xcelerator IP*. This connection can be either via a wireless NIC or via a LAN connection to an Ethernet port on the *Xcelerator IP* gateway.

Xcelerator IP Default Settings

LAN IP Address: 192.168.1.1

WAN IP Address: 192.168.10.210

Web Login: user name = admin; password = admin

Establishing a Connection

1 - Entering the Web Address

After entering the IP address of the *Xcelerator IP* from your Web Browser, a dialog box will pop up to request the user to enter user name and password.

2 - Logging In

Enter the administrator user name/ password into the fields and click the OK button. (The default user name/password is admin/admin).

Once the user name and password have been verified, the "*Xcelerator IP*" home page will display in your browser window as shown here -->

3 - Selecting Advanced Setup

When selecting "Advanced Setup" on the *Xcelerator IP* home page, the "Device Info - Summary" options will display as shown in the "Summary Settings" section below. The Web Configuration of the *Xcelerator IP* is divided into the following six categories:

- Device Info
- Advanced
- Wireless
- Voice
- Management
- Diagnostics

Each of these categories expand to display additional programming interface screens, as required, for each specific area.

Device Info (System Status)

The Device Info page provides overview information that reflects the current status of *Xcelerator IP* connection. The main page shows the current hardware and software version information, as well as the IP network addressing scheme for the *Xcelerator IP*. The Device Info page contains four subcategories that include the following topics:

- Summary
- Statistics
- Route
- ARP

Summary Info

The Summary section details the current software version IP address for the system. It also includes Version Info and Network Info as shown below.

Statistics Info (Network)

The Statistics section contains default traffic to and from the LAN and WAN interfaces of the *Xcelerator IP*.

Route Info

The Route section lists the IP route information programmed on the *Xcelerator IP*.

ARP Info

The ARP (Address Resolution Protocol section shows an ARP table which maps IP network addresses to hardware addresses used by data link level protocol.

Advanced Settings

The Advanced Setup section allows a system administrator to configure the following topics:

LAN

WAN

Route

- Static Route
- RIP

NAT

- Virtual Servers
- Port Trigger
- DMZ

Security

- Incoming Filtering
- Outgoing Filtering
- Parental Service

Quality of Service

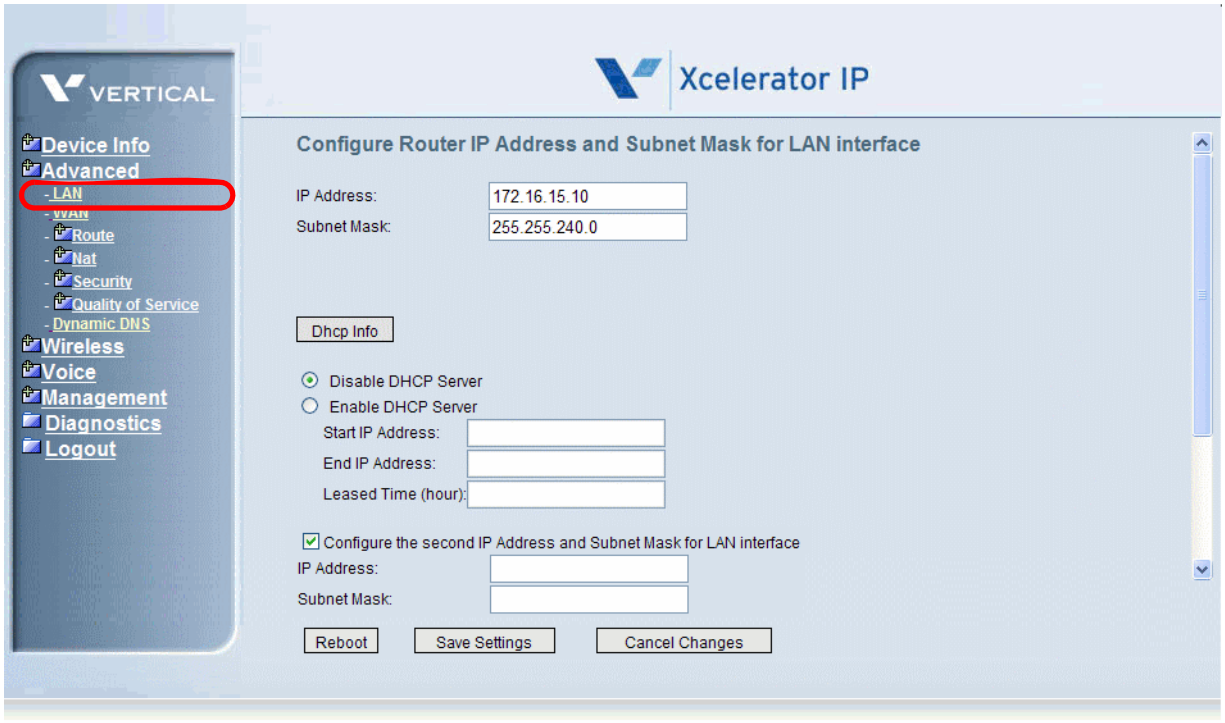
- Traffic Class
- Bandwidth Control

Dynamic DNS

LAN Parameters

The LAN section allows you to set LAN IP and Subnet Mask for the LAN interface. You can also enable or disable DHCP Server and configure related settings for that mode.

» If necessary, check the "Secondary IP" to configure the secondary IP address and Subnet Mask for LAN interface. This IP address is used for management only.



WAN Parameters

There are three options available for setting the WAN IP address:

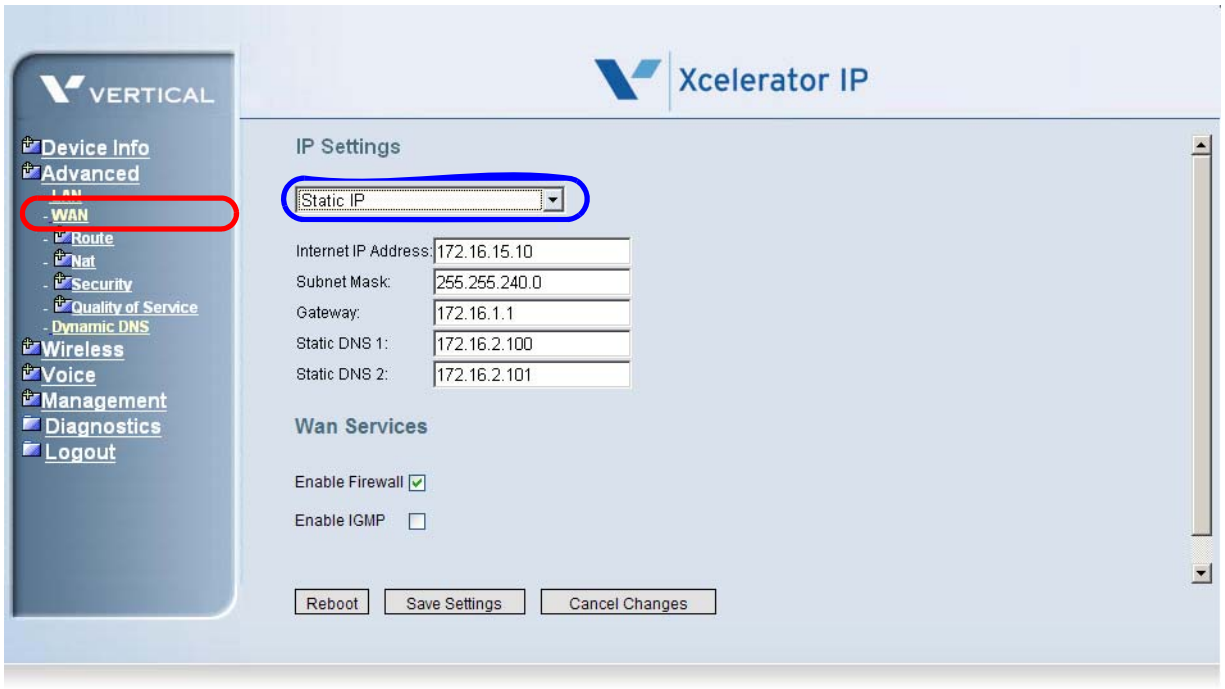
- Static IP mode
- DHCP mode
- PPPoE mode

You can also enable or disable Firewall and IGMP.

- When the Firewall option is selected, firewall settings are configured in the Security directory. If the firewall settings selection is disabled, the Security directory will be disabled.
- Network Address Translation (NAT) allows you to share one Wide Area Network (WAN) IP address for multiple computers on your Local Area Network (LAN). In *Xcelerator IP*, NAT is enabled by default and is not displayed on the page to prevent it from being disabled.

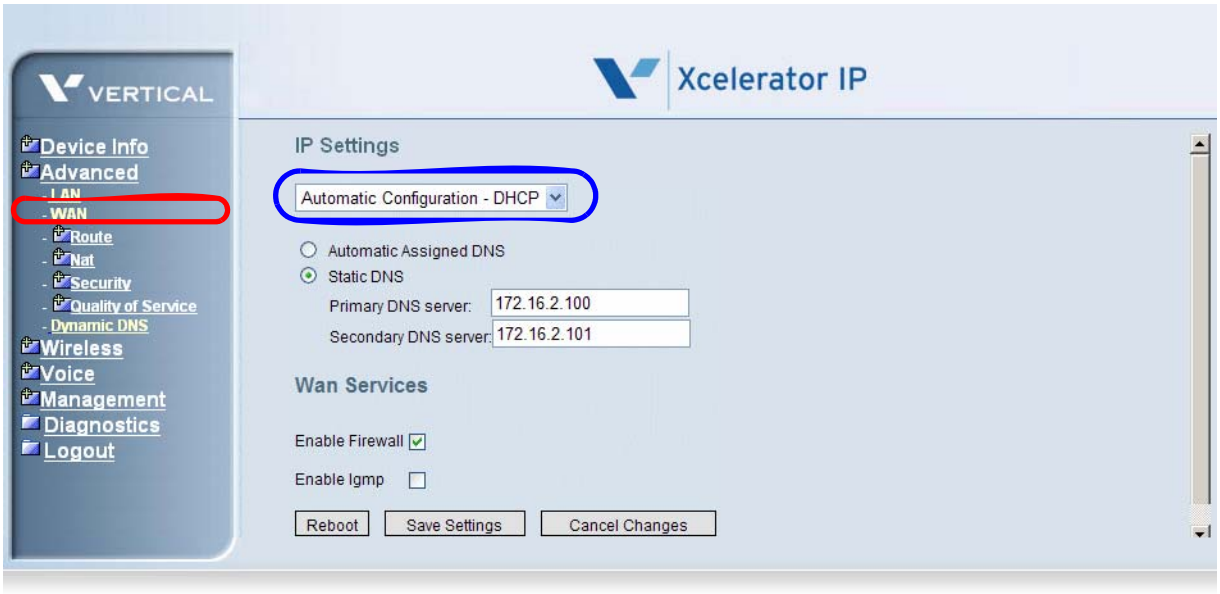
Static IP

The Static IP selection shows the current existing WAN interfaces in the system for Static IP mode.



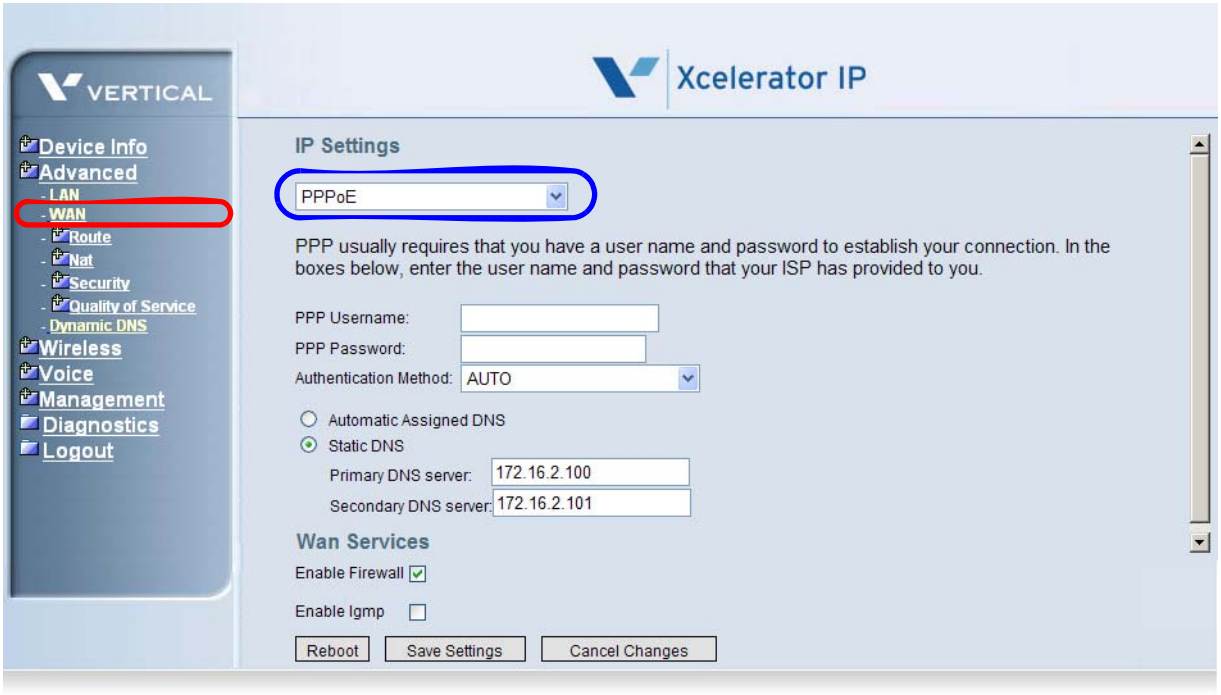
Automatic Configuration (DHCP)

The Automatic Configuration selection shows the current existing WAN interfaces in the system for DHCP mode.



PPPoE

The PPPoE selection shows the current existing WAN interfaces in the system for PPPoE mode.

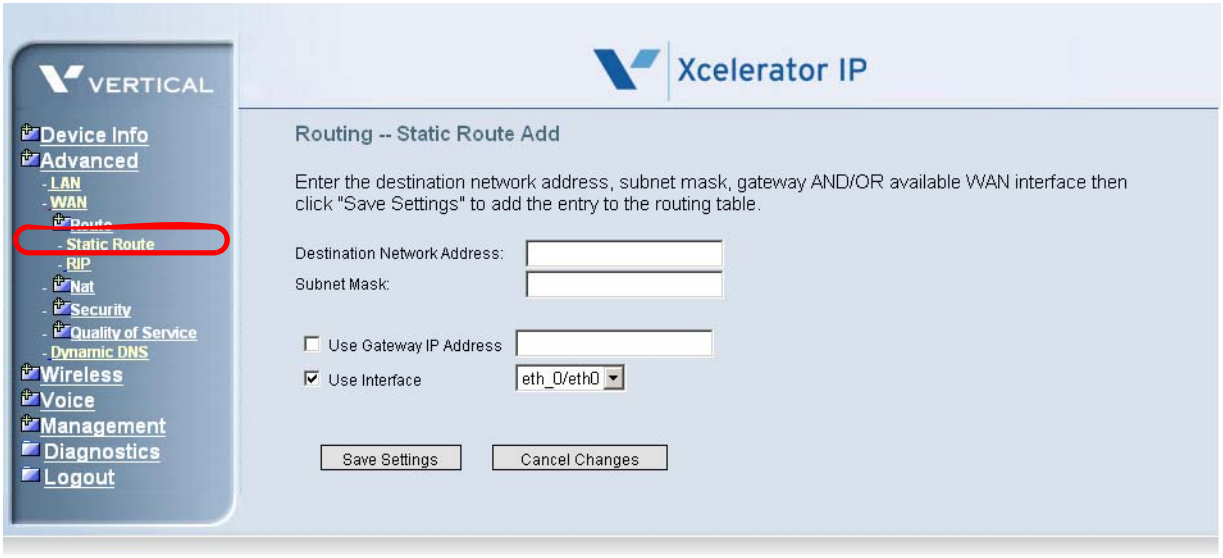


Route

The Routing options are separated into two parts: Static Route and RIP (Routing Information Protocol).

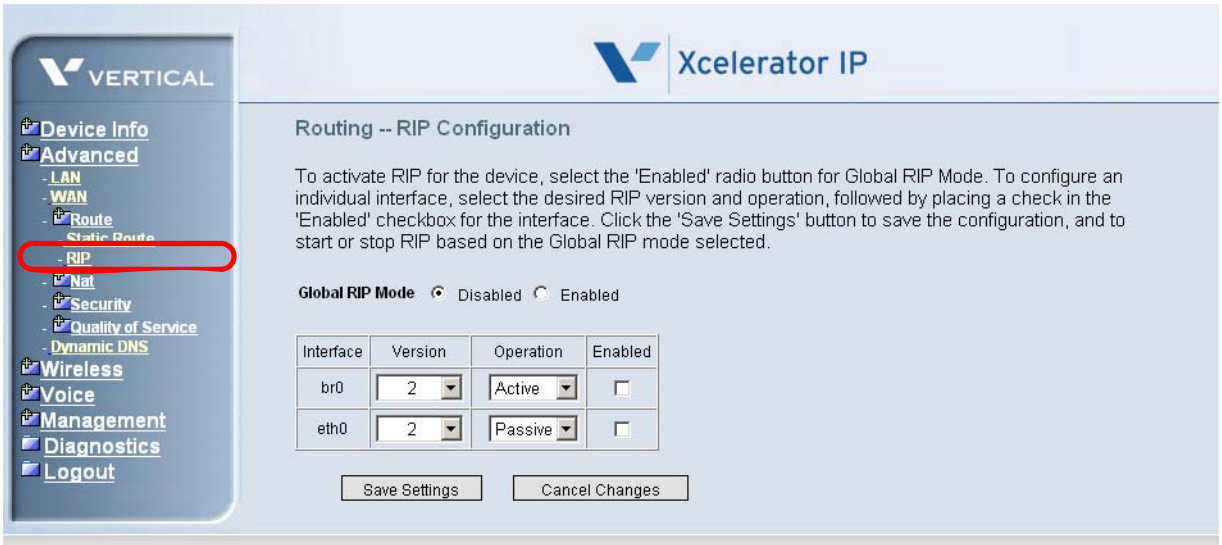
Static Route (Add)

- On the Routing page, click on the ADD button to create a new Static Route.
- Enter the destination network address, subnet mask, gateway AND/OR available WAN interface, then click "Save Settings" to add the entry to the routing table.
- A maximum of 32 entries may be configured.



RIP

- To activate RIP for a device, select the "Enabled" radio button for Global RIP Mode.
- To configure an individual interface (br0 or eth0), select the desired RIP version (1, 2 or Both) and the mode of operation (Active or Passive), then click the "Enabled" checkbox for the desired interface.
- Click the "Save Settings" button to save the configuration and to start or stop RIP based on the Global RIP mode selected.



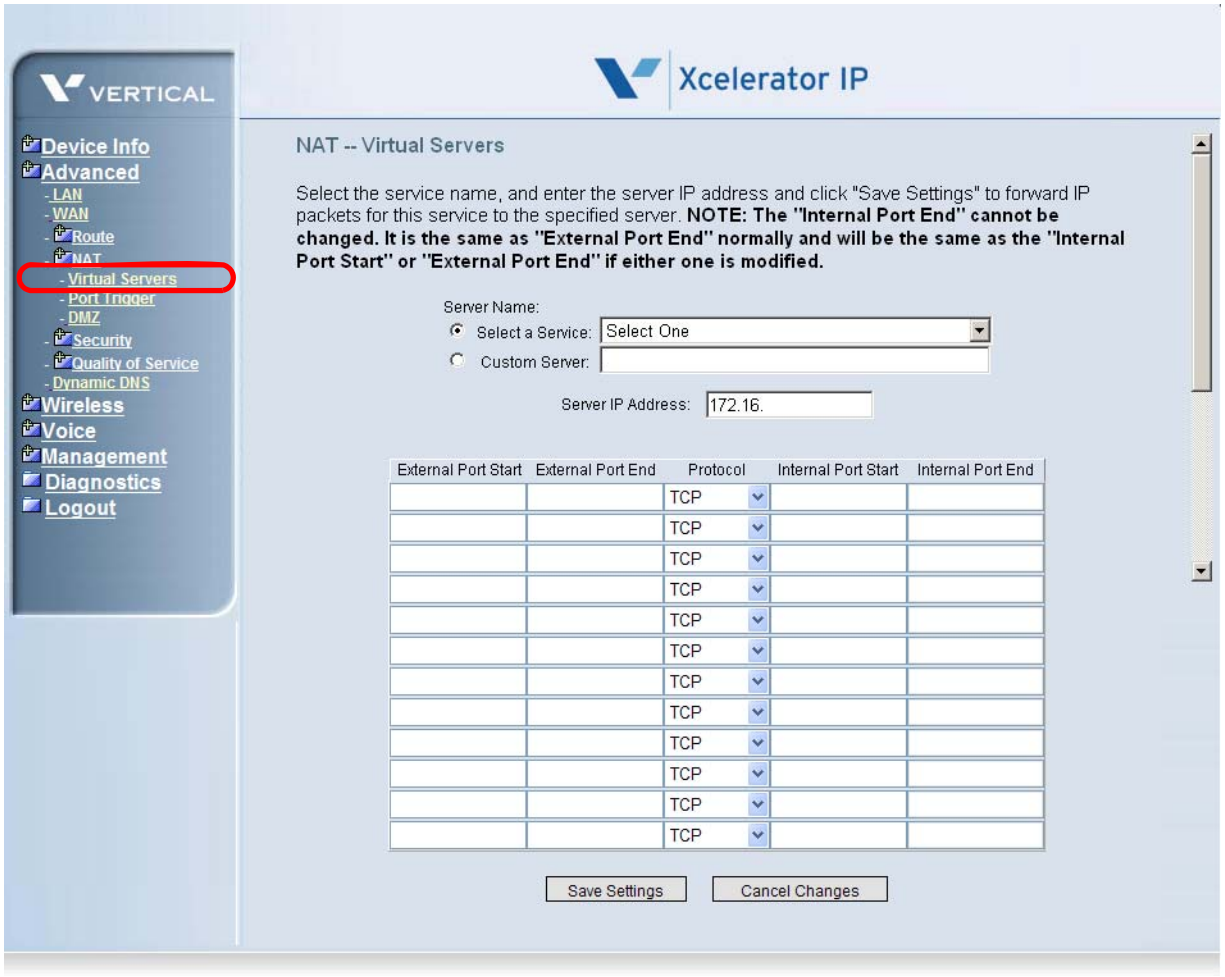
NAT

The NAT option is separated into three parts:

- Virtual Servers
- Port Trigger
- DMZ

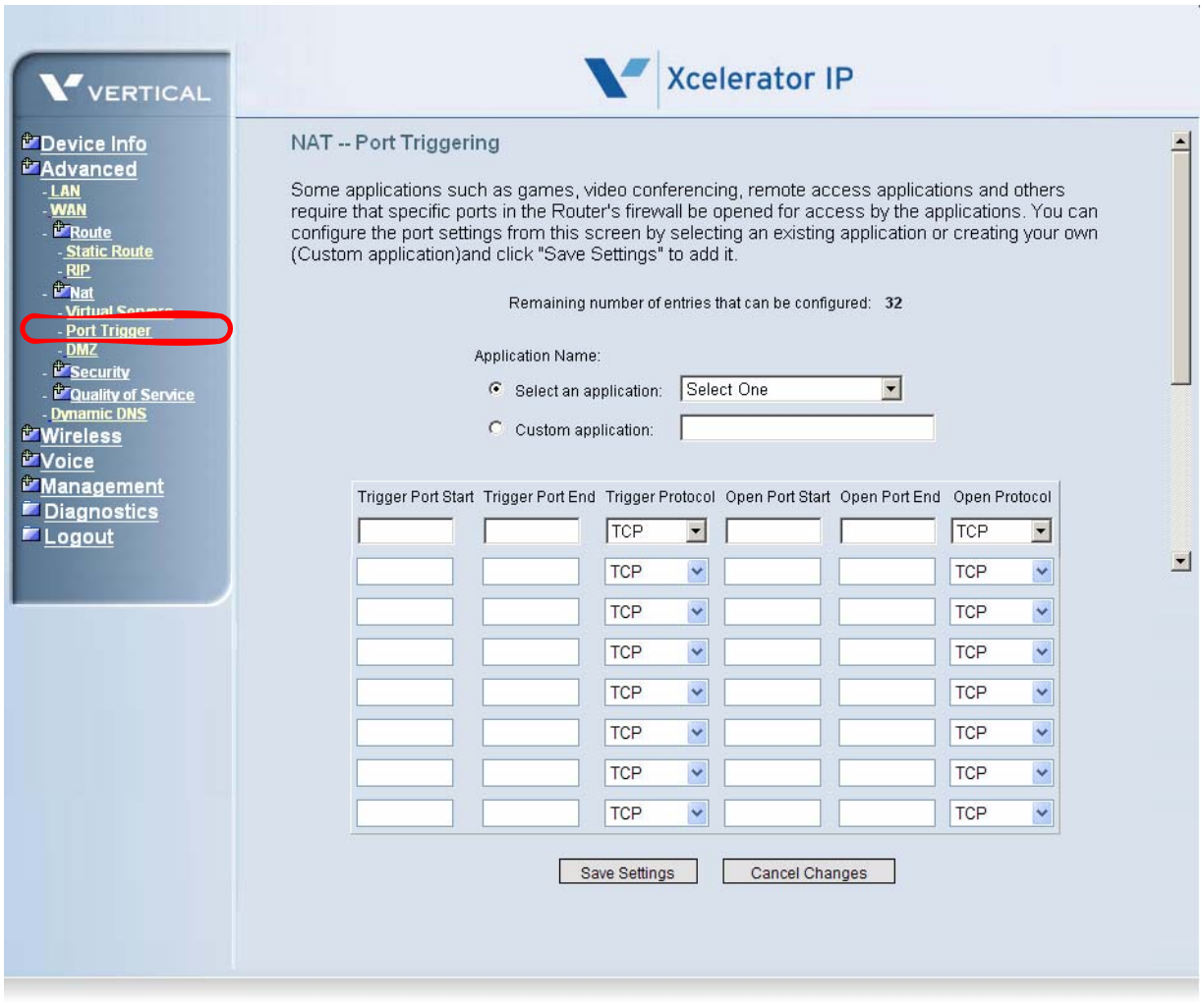
Virtual Servers

The Virtual Servers section allows you to direct incoming traffic from the WAN side (identified by Protocol, IP address and service port) to the internal server with a private IP address on the LAN side.



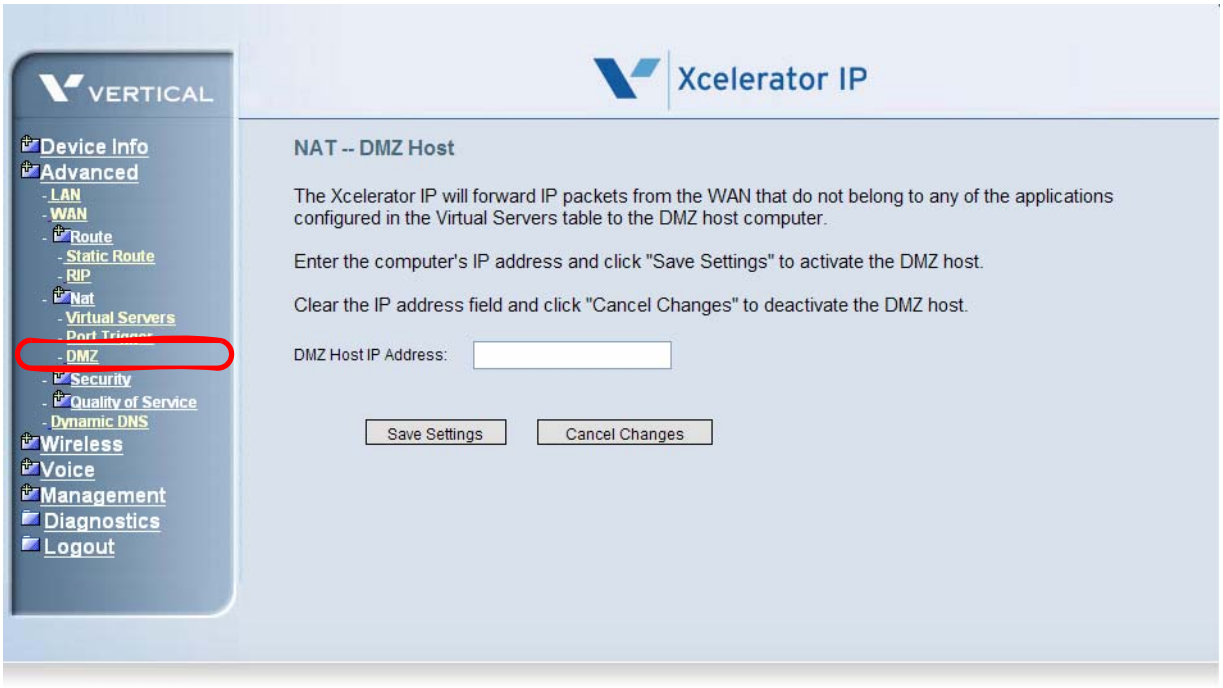
Port Trigger

Certain applications require that specific port(s) in the Router's firewall be opened for access by the remote parties. Port Trigger dynamically opens up the "Open Ports" in the firewall when an application on the LAN initiates a TCP/UDP connection to a remote party using the "Triggering Ports". The Router allows the remote party from the WAN side to establish new connections back to the application on the LAN side using the "Open Ports". A maximum 32 entries can be configured.



DMZ

The *Xcelerator IP* will forward IP packets from the WAN that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer.



Security

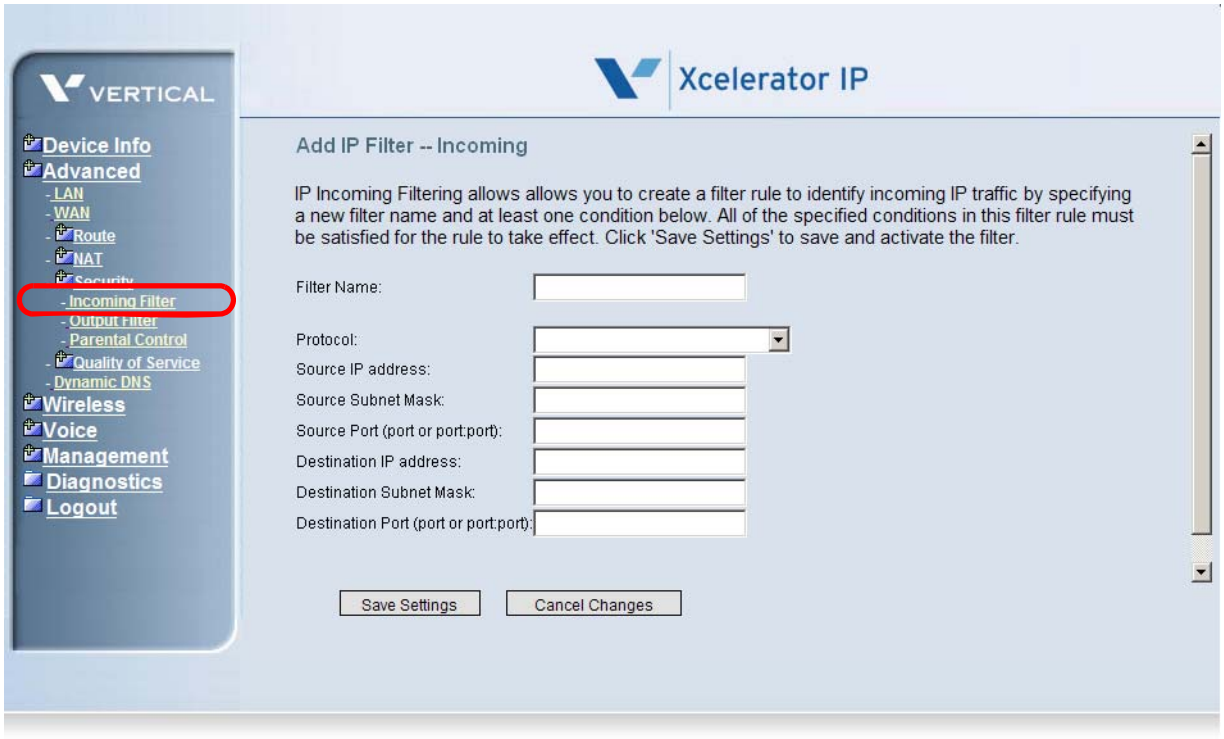
The Security configuration is shown only when the WAN page Security options is selected. The Security directory is separated into three parts:

- Incoming Filter
- Output Filter
- Parental Control

Incoming Filter

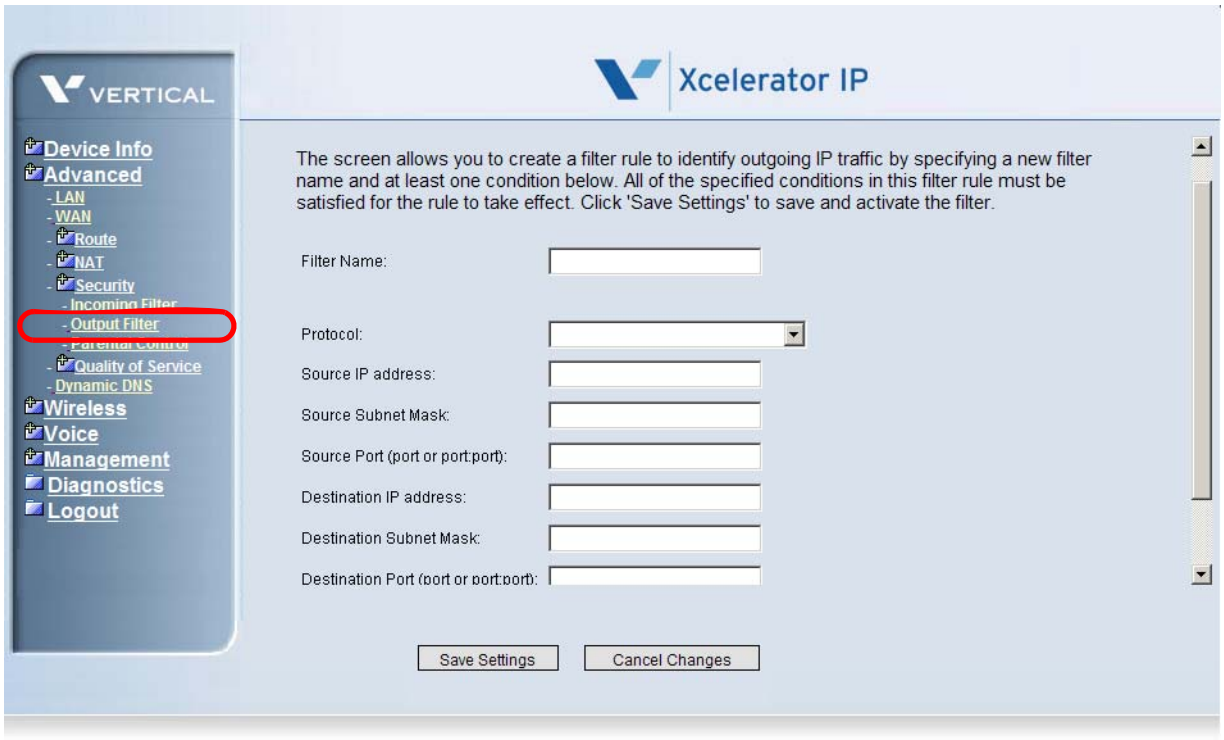
The Incoming Filter allows the user to create a filter rule to identify incoming IP traffic be specifying a new filter name and at least one condition. All specified conditions in this filter rule must be satisfied for the rule to take effect.

By default, all incoming IP traffic from the WAN will be blocked if it is not consistent with the incoming filter rules. However, *Xcelerator IP* will open some necessary ports such as a Web port, SIP ports and RTP ports to ensure that voice applications will be able to communicate.



Output Filter

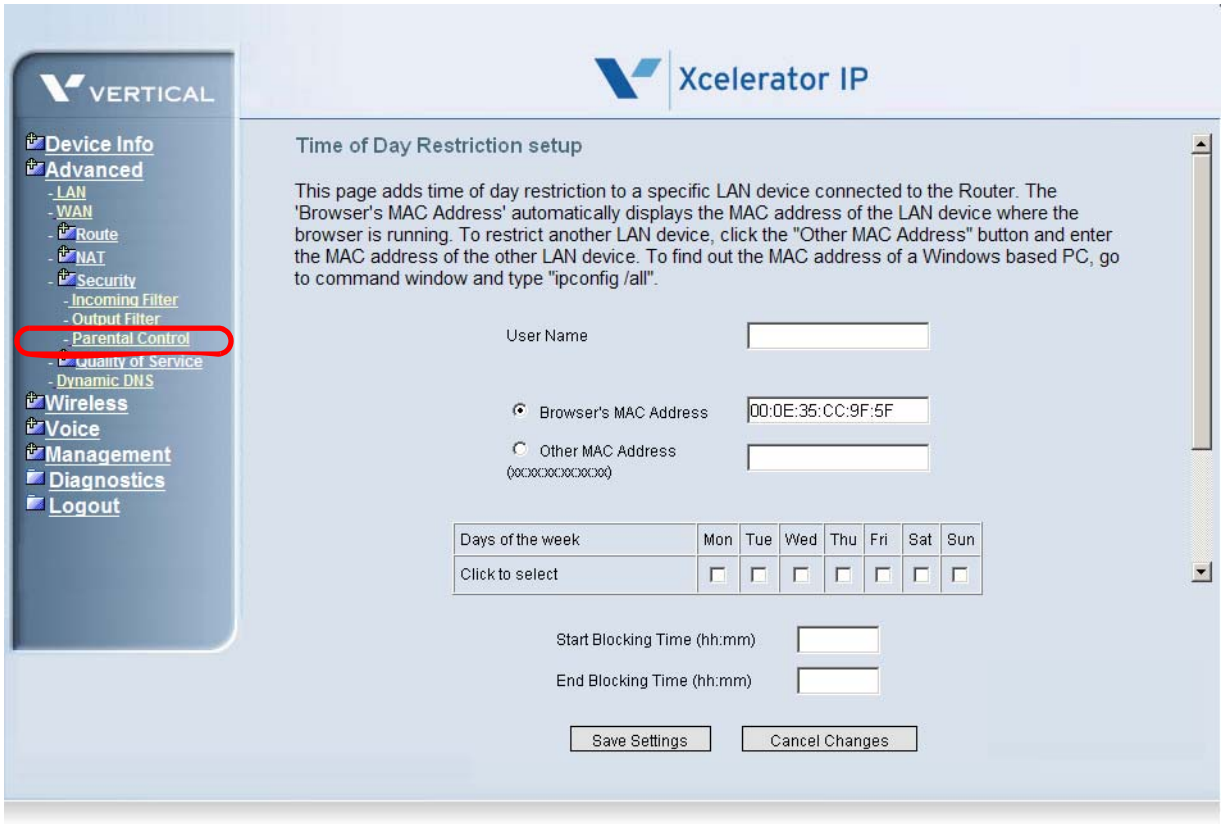
The Output Filter allows the user to create a filter rule to identify outgoing IP traffic by specifying a new filter name and at least one condition below. All specified conditions in this filter rule must be satisfied for the rule to take effect.



Parental Control

The Parental Control section adds time restrictions to a special LAN device connected to the Router. The 'Browser's MAC Address' automatically displays the MAC address of the LAN device where the browser is running.

- To restrict other LAN devices, click the "Other MAC Address" button and enter the MAC address of the other LAN device.
- A maximum of 16 entries may be configured.



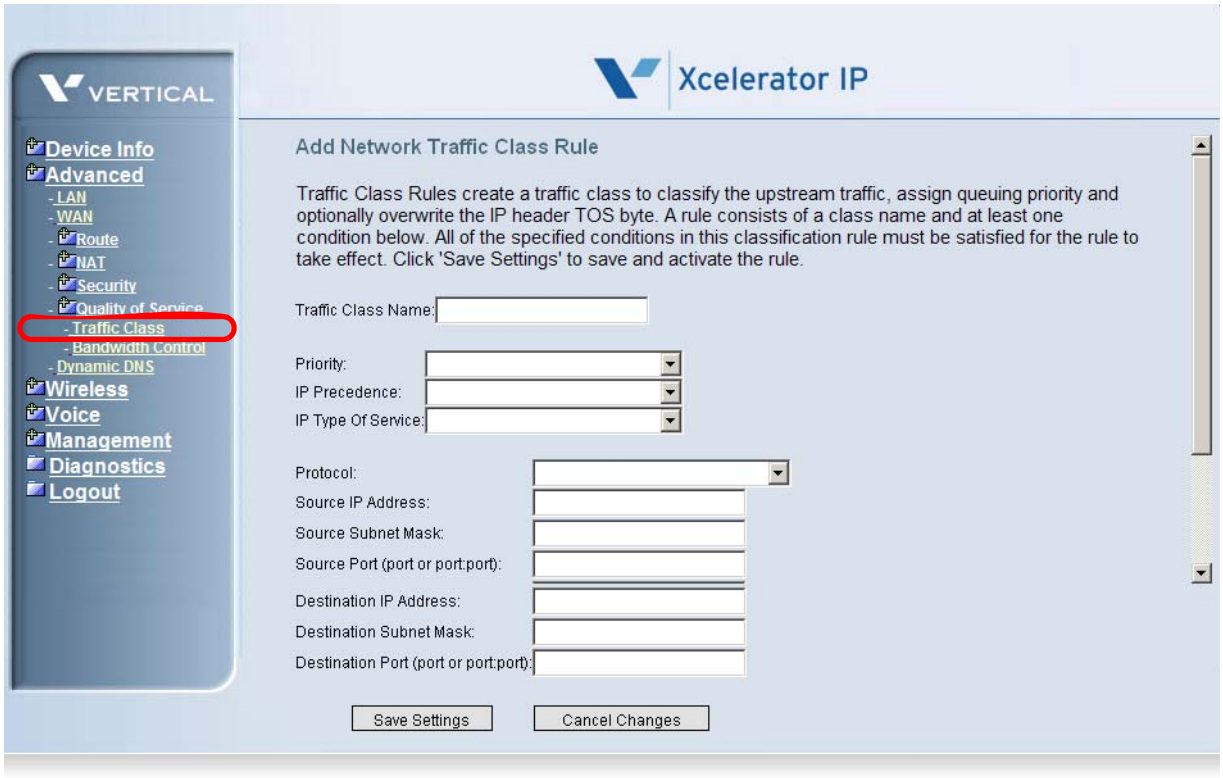
Quality of Service (QOS)

The Quality of Service section is separated into two parts:

- Traffic Class
- Bandwidth Control

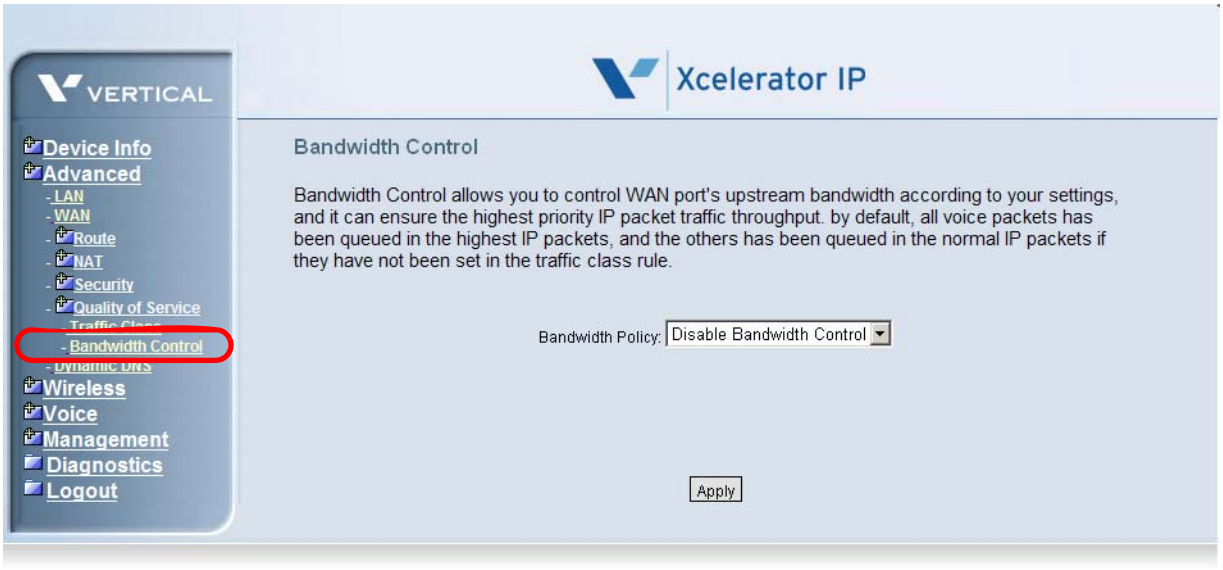
Traffic Class

- Click on the ADD button to create a Traffic Class to identify the IP traffic by specifying at least one condition. If multiple conditions are specified, all of them should be satisfied to make sure the rule will take effect.
- IP QOS is applied to the traffic from LAN to WAN; traffic from WAN to LAN will not have QOS assigned to the incoming packets.
- Enter the QOS class name for this policy. Define the priority for this policy, and the priority will be used by the Bandwidth Control setting. *Xcelerator IP* will modify the IP header with new IP Precedence and/or IP Type of Service fields.
- Traffic Class is an IP Layer QOS policy. At least (but not limited to) one condition must be configured.



Bandwidth Control

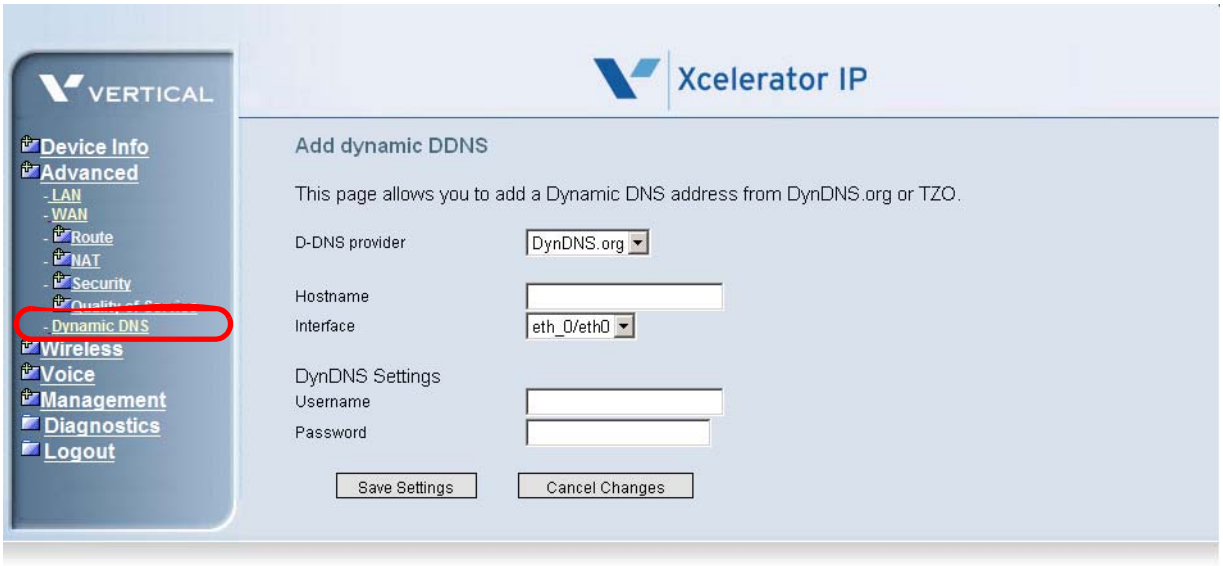
The Bandwidth Control section allows you to control the WAN port upstream bandwidth in accordance with user configured settings. Bandwidth Control can ensure the highest priority IP packet traffic first. By default, all voice packets have been queued in the highest priority IP packets. Other types have been queued in the normal IP packets if they have not been set in the priority field of the traffic class rule.



Dynamic DNS Menu

The Dynamic DNS service allows you to alias a dynamic IP address to a static host name in any of the many domains, allowing your DSL router to be more easily accessed from various locations on the Internet.

You must be working with the Server or visit the website for instructions.



Wireless Settings

The Wireless directory is used to configure the *Xcelerator IP* for wireless access. It is separated into 6 parts:

- Basic
- Security
- MAC Filter
- Wireless Bridge
- Advanced
- Station Info

Wireless - Basic Parameters

The Wireless Basic setting allows the user to configure the basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans, set the wireless network name (also known as SSID) and restrict the channel set based on country requirements.

Wireless - Security Parameters

The Wireless Security page allows the user to configure the security features of the wireless LAN interface. Wireless Security allows you to perform the following functions:

- Programming of the network authorization method.
- Selection of the data encryption method.
- Specify if a network key is required to authenticate to this wireless network.
- Specify the encryption strength.

The following security items are configured on the page:

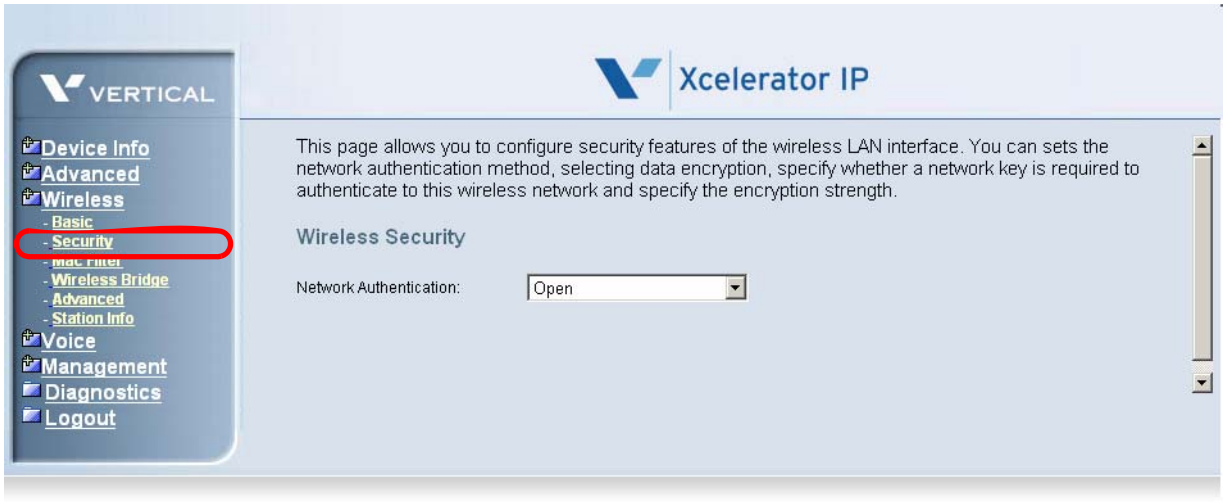
Network Authentication -- Sets the network Authentication method. 802.1X and WPA require the user to set valid RADIUS parameters. WPA-PSK requires a valid WPA Pre-Shared Key to be set.

802.1X -- As the IEEE standard for access control for wireless and wired LANs, 802.1x provides a means of authentication and authorizing devices to attach to a LAN port. This standard defines the Extensible Authentication Protocol (EAP), which uses a central authentication server to authenticate each user on the network.

WPA/WPA2 -- The Wi-Fi Alliance defines WPA/WPA2 as a data encryption method for 802.11 wireless LANs. WPA is an industry-supported, pre-standard version of 802.11i utilizing the Temporal Key Integrity Protocol (TKIP), which fixes the problems of WEP, including using dynamic keys.

WPA/WPA2 Pre-Shared Key -- Sets the WPA/WPA2 Pre-Shared Key (PSK).

WPA/WPA2 Group Rekey Interval -- Sets the WPA/WPA2 Group Rekey Interval in seconds. Leave this setting blank or set to zero to disable periodic re-keying.



RADIUS Server -- Sets the IP address of the RADIUS server to use for authentication and dynamic key derivation. Radius Server is responsible for receiving user connection requests, authenticating the user, and then returning all of the configuration information necessary for the client to deliver the server to the user.

Radius Port -- Sets the UDP port number of the RADIUS server. The port number is usually 1812 or 1645 and depends on the server.

Radius Key -- Sets the shared secret for the RADIUS connection.

WEP Encryption -- Selecting Disabled disables WEP data encryption. Selecting Enabled enables WEP data encryption and requires that a valid network key be set and selected unless 802.1X is enabled.

WEP (Wired Equivalent Privacy) -- WEP is a protocol for wireless LANs or local area networks. This WEP is defined in the 802.11 Standard. WEP is designed so security levels are maintained at the same level as the wired LAN. WEP's aim is to provide security by encrypting data over radio waves. WEP protects data as it's transmitted from one end point to another. WEP is used at two lowest layers, the data link and physical layer. WEP is designed to make up for the inherent security in wireless transmission as compared to wired transmission.

Shared Key Authentication -- Sets whether shared key authentication is required. A valid network key must be set and selected if required.

Wireless - Mac Filter Parameters

The MAC Filter allows a user to Add/Remove hosts with the specified MAC addresses that are able or unable to access the wireless network.

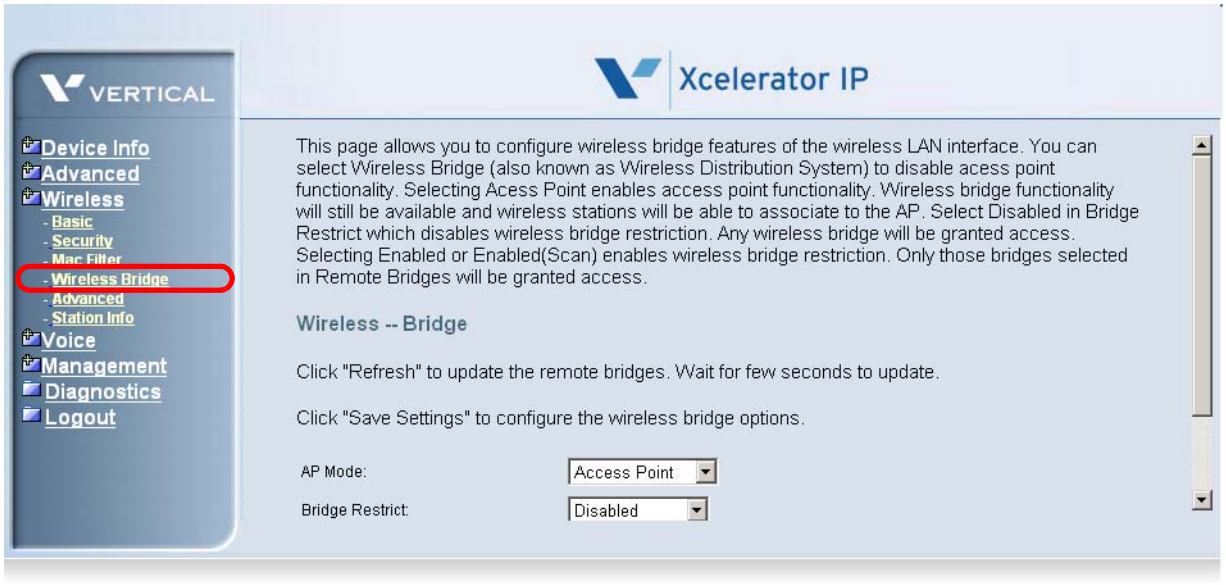
- Allow option -- only the MAC addresses in the user-defined list can access the wireless network.
- Deny option -- only the user-specified MAC addresses are unable to access to wireless network.
- Disable option -- all users will be able to access to the wireless network.

NOTE -- The MAC addresses in the list will take effect immediately when Allow or Deny is checked.

Wireless - Bridge Parameters

The Wireless Bridge will allow you to configure the wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to disable access point functionality.

- Selecting **Access Point** enables access point functionality. Wireless bridge functionality will still be available, and allow wireless stations to associate to the AP.
- Selecting **Disabled** in "Bridge Restrict" will disable the wireless bridge restriction, allowing any wireless bridge to be granted access.
- Selecting **Enabled** or **Enabled (Scan)** enables wireless bridge restriction. Only those bridges defined in Remote Bridges will be granted access.



Wireless - Advanced Parameters

The Wireless Advanced settings allow you to configure more advanced features of the wireless LAN interface. You can select a particular channel on which to operate, force the transmission rate to a particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interval for clients in power-save mode, set the beacon interval for the access point, set XPress mode and set whether short or long preambles are used.

Channel -- Select the appropriate channel from the list provided to correspond with your network settings. All devices in your wireless network must use the same channel in order to function correctly.

Rate -- The default setting is Auto. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from one transmission speed, or keep the default setting, Auto, to have the *Xcelerator IP* automatically use the fastest possible data rate.

Multicast Rate -- The default setting is 54Mbps. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from one transmission speed, or keep the default setting, to have the *Xcelerator IP* automatically use the fastest data rate for multicast packets.

Basic Rate -- Select the basic rate that wireless clients must support.

Fragmentation Threshold -- This value should remain at its default setting of 2346. The range is 256-2346 bytes. The Fragmentation Threshold specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting this value too low may result in poor network performance. Only minor modifications of this value are recommended.

RTS Threshold -- This value should remain at its default setting of 2347. The range is 0-2347 bytes. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the packet RTS threshold size, the RTS/CTS mechanism will not be enabled. The *Xcelerator IP* sends Request of Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission.

DTIM Interval -- The default value is 3. This value, between 1 and 255 milliseconds, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the router has buffered broadcast or multicast for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast message.

Beacon Interval -- The default value is 100. Enter a value between 1 and 65535 milliseconds. The Beacon Interval value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the router to synchronize the wireless network.

XPress™ Technology -- Select to enable/disable this proprietary mode.

54g™ Mode -- Select the mode to 54g Auto for the widest compatibility. Select the mode to 54g Performance for the fastest performance among 54g certified equipment. Set the mode to 54g LRS if you are experiencing difficulty with legacy 802.11b equipment.

54g protection -- In Auto mode the *Xcelerator IP* will use RTS/CTS to improve 802.11g performance in mixed 802.11g/802.11b networks. Turn protection off to maximize 802.11g throughput under most conditions.

WMM (WiFi Multimedia) -- Select to enable/disable the support.

Wireless - Station Info Menu

The Wireless Station Info section shows authenticated wireless stations and their status.

Voice Settings

The Voice section is used to configure the *Xcelerator IP* voice related parameters. The Voice section allows the system administrator to configure the following topics:

Phone
- Phone Extension
- Extension Linekey

Trunk
- IP Trunk
- Trunk Group
- Answering Positions
- Call Restriction Table
- Call Routing Table

System
- Numbering Plan
- Service Mode
- Transmission
- IG Dynamic Discovery
- IG Expansion Table

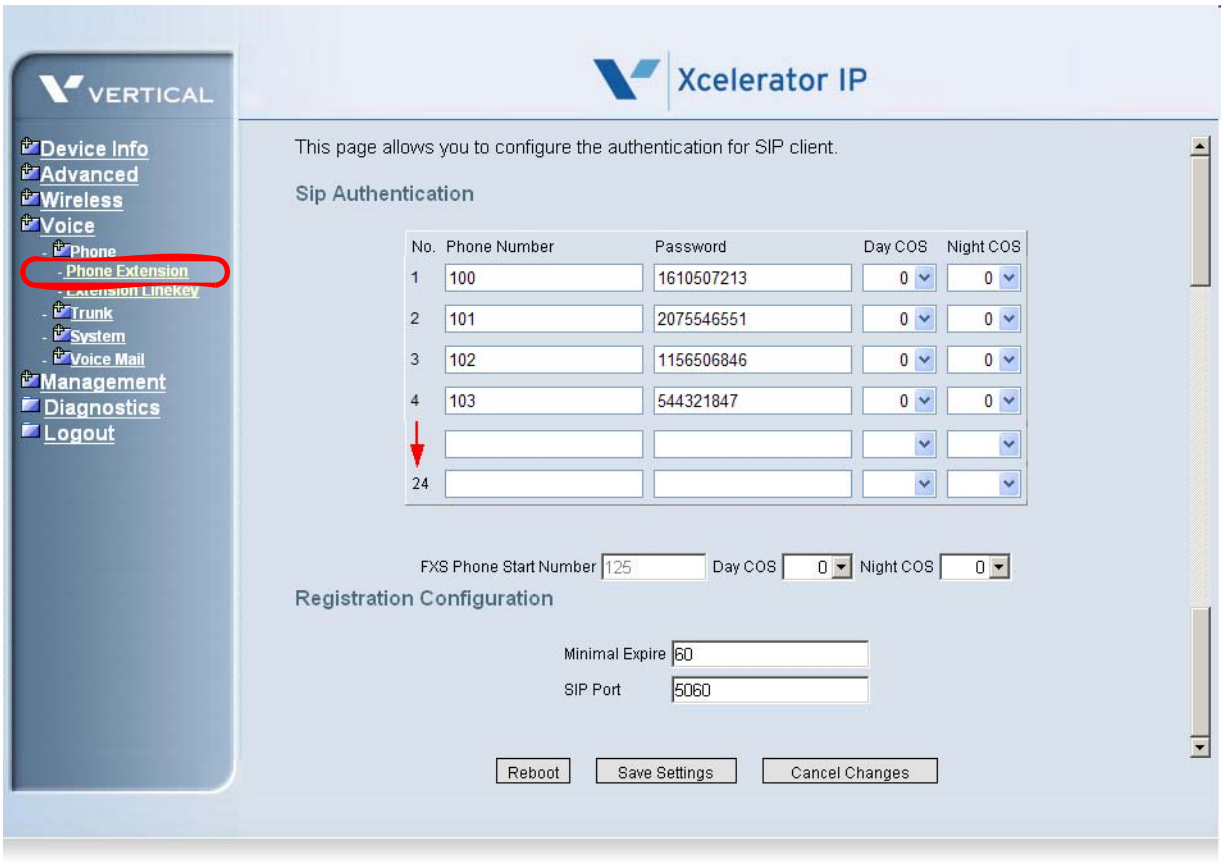
Voice Mail
- General
- Extension
- Holiday
- Advanced

Phone Menu

The Phone extension screen is used to configure the *Xcelerator IP* phone extension authentication, and the IP2007 Phone extension line key default setting.

Phone Extension

The *Xcelerator IP* combines Proxy and Registrar servers in its application. All phones registered to the internal Registrar are set here.



SIP Authentication: Up to 24 IP phones can be registered.

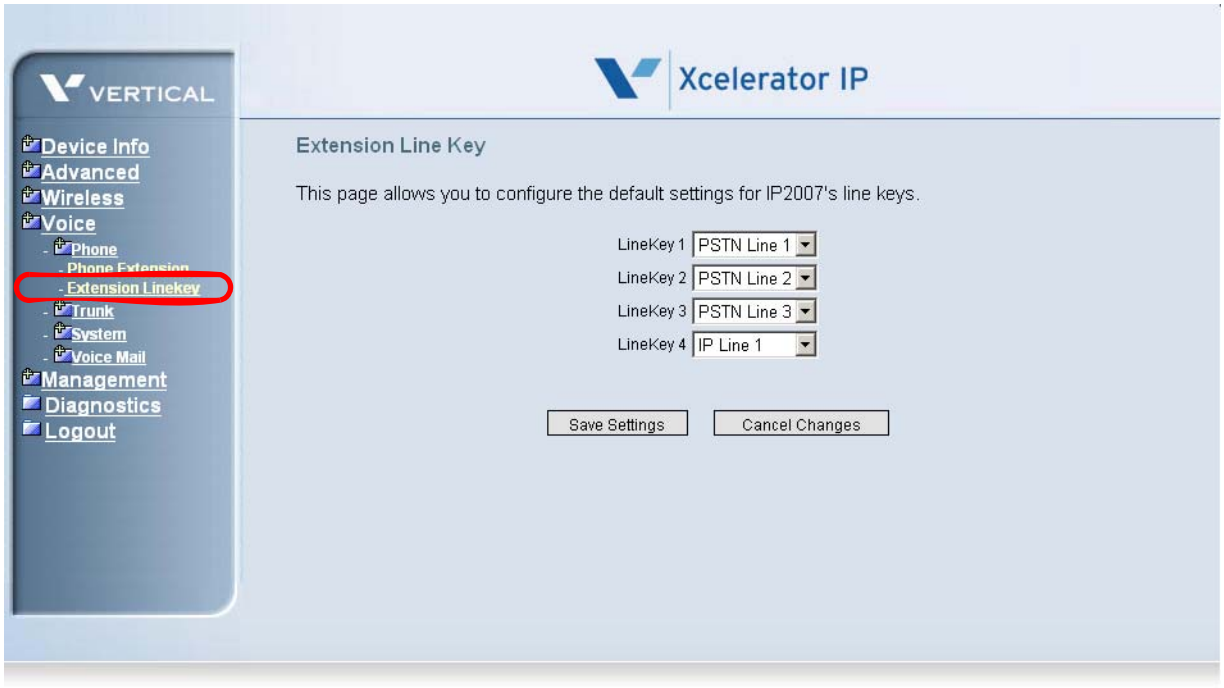
- *Phone Number* -- The phone number is a station number. If it conflicts with the setting in Numbering Plan, the registration will fail and the *Xcelerator IP* will not add the phone or make the change. The Phone number value range is limited by Start Extension Number and End Extension Number settings in the Numbering Plan page.
- *Password* -- The user password of this phone. The length is up to 24 digits or characters. The password is used for Digest Authentication.
- *Day COS* -- This field assigns a Class of Service for day mode operation. Acceptable values are 0-7. At default, all extensions are unrestricted.
- *Night COS* -- This field assigns a Class of Service for night mode operation. Acceptable values are 0-7. At default, all extensions are unrestricted.
- *FXS Phone Start Number* -- This value displays shows the FXS phone number. The FXS phone number is programmed in System - Numbering Plan.

Registration Configuration

- *Minimal Expire* -- defines the minimum refresh interval registrar time supported for these IP phones managed by the *Xcelerator IP*.
- *SIP Port* -- The *Xcelerator IP* listens for requests on the SIP port. This port is used for UDP application and 5060 is its recommended value. The default value is 5060.

Extension Linekey

The Extension linekey section allows a user to configure the default settings for the IP2007 phone Linekeys. When an IP2007 phone is registering to the *Xcelerator IP*, the *Xcelerator IP* will send these settings to the phone.



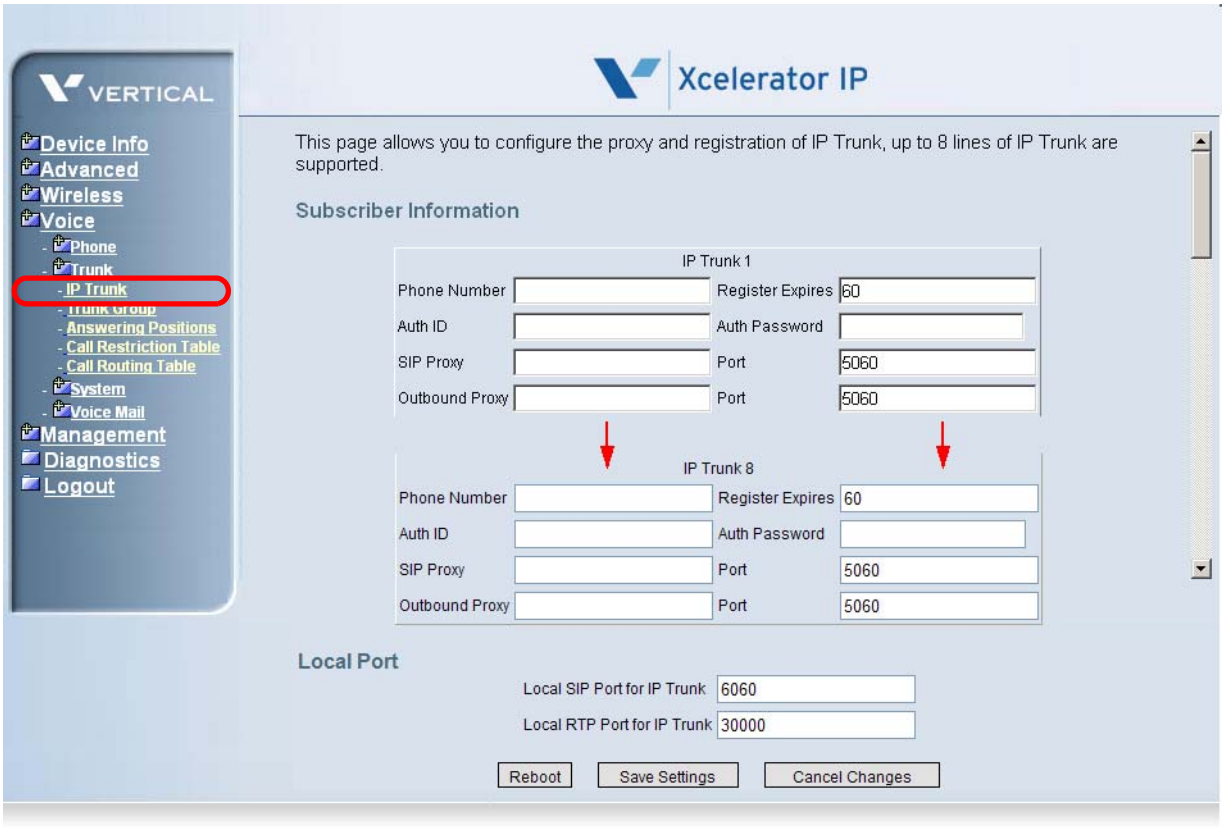
Trunk Menu

The Trunk screen is used to configure the PSTN/IP Trunk function related parameters. It is separated into 5 parts:

- IP Trunk
- Trunk Group
- Answering Positions
- Call Restriction Table
- Call Routing Table

IP Trunk

The IP Trunk page allows you to configure the proxy and registration server of IP Trunk; up to 8 lines of IP Trunk are supported.



Subscriber Information

- *Trunk Number* -- The assigned trunk number from Uplink Server.
- *Register Expires* -- how long the *Xcelerator IP* will send the REGISTER command to an uplink registrar server. The values are set in seconds.
- *Auth ID* -- The Account ID of an uplink server used for Digest Authentication.
- *Auth Password* -- The Password to an uplink server used for Digest Authentication.
- *SIP Proxy* -- The address of an uplink registrar server (for Inbound Calls). Digital IP address and domain name are all supported.
- *SIP Proxy Port* -- SIP signal port of an uplink registrar server.
- *Outbound Proxy* -- The address of an uplink outbound proxy server (for Outbound Calls). All SIP request packets will be sent to this server which will determine their next hops.
- *Outbound Proxy Port* -- SIP signal port of an uplink outbound proxy server.

Local Port

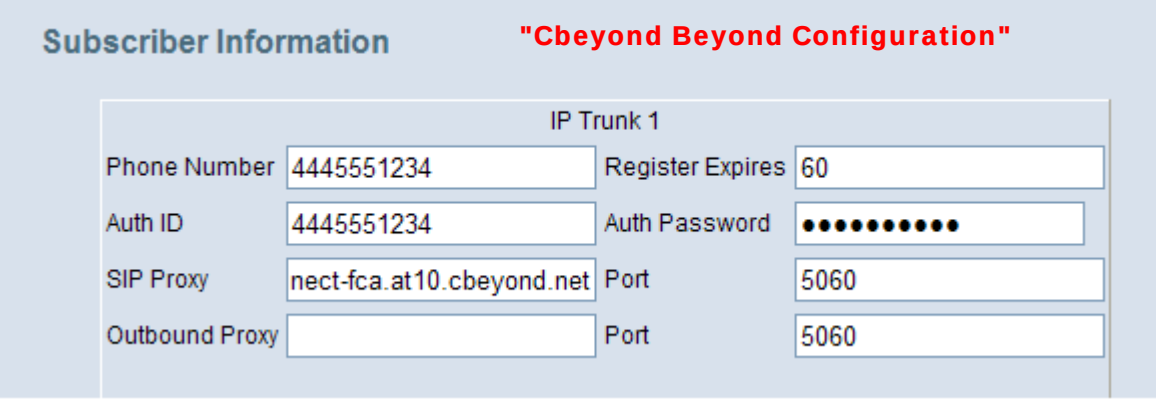
- *Local SIP Port for IP Trunk* -- SIP control signal packet Port of IP Trunk Client.
- *Local RTP Port for IP Trunk* -- Real-Time Protocol packet Port of IP Trunk Client. This port is the Start RTP port address for these IP Trunks.

Using Cbeyond Beyond Voice™ Connect Service

The following instructions are for those customers that wish to use Cbeyond Beyond as their SIP trunk provider.

To setup the SIP trunks:

1. From the main *Xcelerator IP* Web page, click Voice > Trunk > IP Trunk. The Subscriber Information screen will display.
2. Complete the phone number field with the number provided to you by Cbeyond. This is usually the same as your user name.
3. Enter the "Auth ID" and "Auth Password" with the user name and password for Digest Challenge provided to you by Cbeyond.
4. Fill in the "SIP Proxy" area with the Proxy Server that is provided to you by Cbeyond (sipconnect-fca.atl0.cbeyond.net)
5. Leave the "Register Expires" and the "Port" information at their default values unless you receive further instructions from Technical Support.



Trunk Group

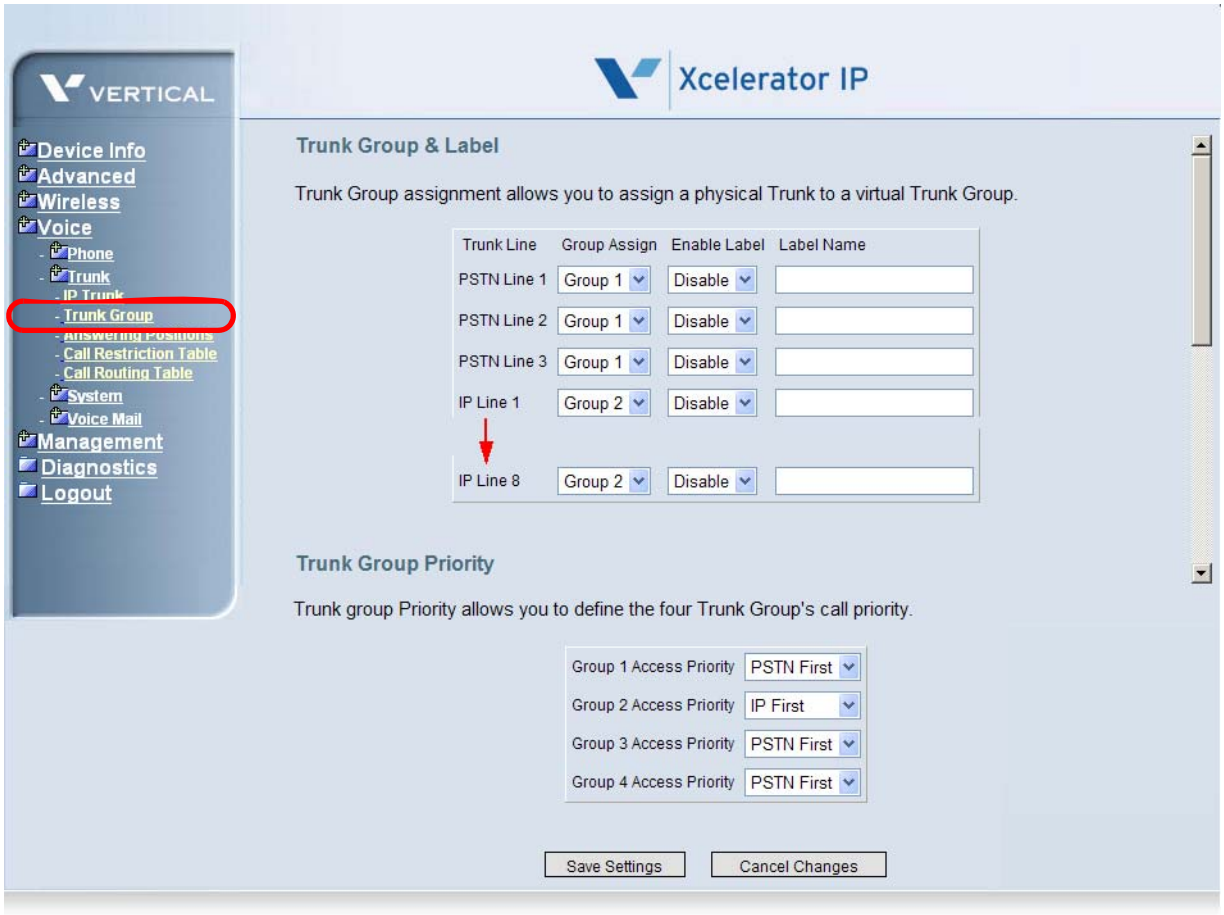
The Trunk Group feature allows you to configure the virtual Trunk Group. Up up to 4 Trunk Groups are supported.

Trunk Group & Label

Trunk Group and Label allows you to assign physical Trunks to virtual Trunk Groups you can configure a personal name or identifying name as an incoming Caller ID number. For three PSTN lines and eight IP lines, you can choose from Group 1 to Group 4.

Trunk Group Priority

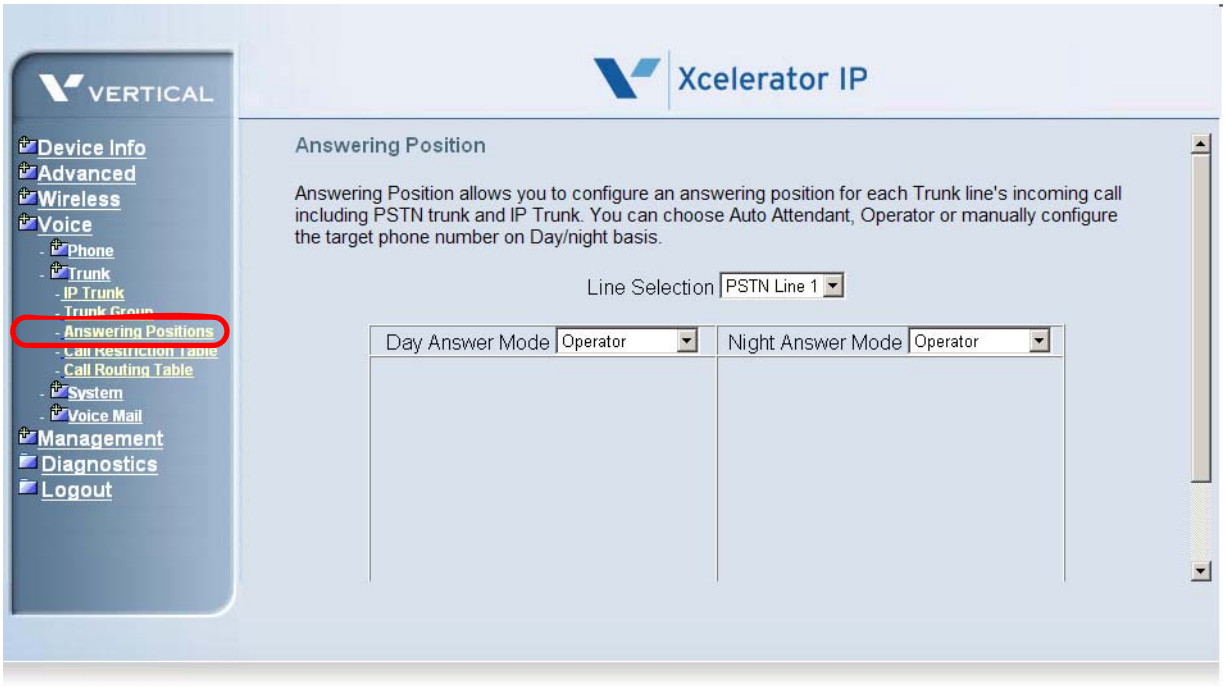
Trunk Group Priority allows you to define the interior dialing priority of four (4) Trunk Groups. For each trunk group, "IP First" or "PSTN First" can be set to define which trunk type will be accessed when calls are placed through the specified trunk group.



Answering Positions

The Answering Positions screen allows you to configure answering positions for each Trunk line including PSTN trunk and IP Trunk. You can choose Auto Attendant, or manually configure the target phone number on a Day/Night mode basis.

- If **Auto Attendant** is chosen, an idle Auto-Attendant Voice (VAA) greeting will auto-answer this incoming trunk call.
- If **Extension** is chosen, you must configure the target phone number on a Day/Night mode basis. The maximum number of phones that can be defined in this configuration is six. When an incoming trunk call is received by the *Xcelerator IP*, all phones defined in the Extension group will ring. Answering any of the phones in the group will stop the ringing on all other phones.
- If **Operator** is chosen, the incoming trunk call will be redirected to the Operator.



Call Restriction Table

The Call Restriction Table allows you to set the method for out-dialing from the IP2007.

- The value Y indicates that the caller must select a line key prior to dialing a number.
- The value N indicates that the caller may place a call without selecting a line key.
- A value of YN indicates either operation is supported

From/To

The allowed intervals are made up of a From and To entry which establishes a numeric range. *For example*, an entry of "From 1700", "To 1800" would include the following range of numbers as the leading: 1700, 1701, 1702, ...1799, 1800. Each From/To entry can be from 1 to 13 digits long and may contain any digit 0-9, or X (X representing any digit). The "From" entry must be less than or equal to the "To" entry.

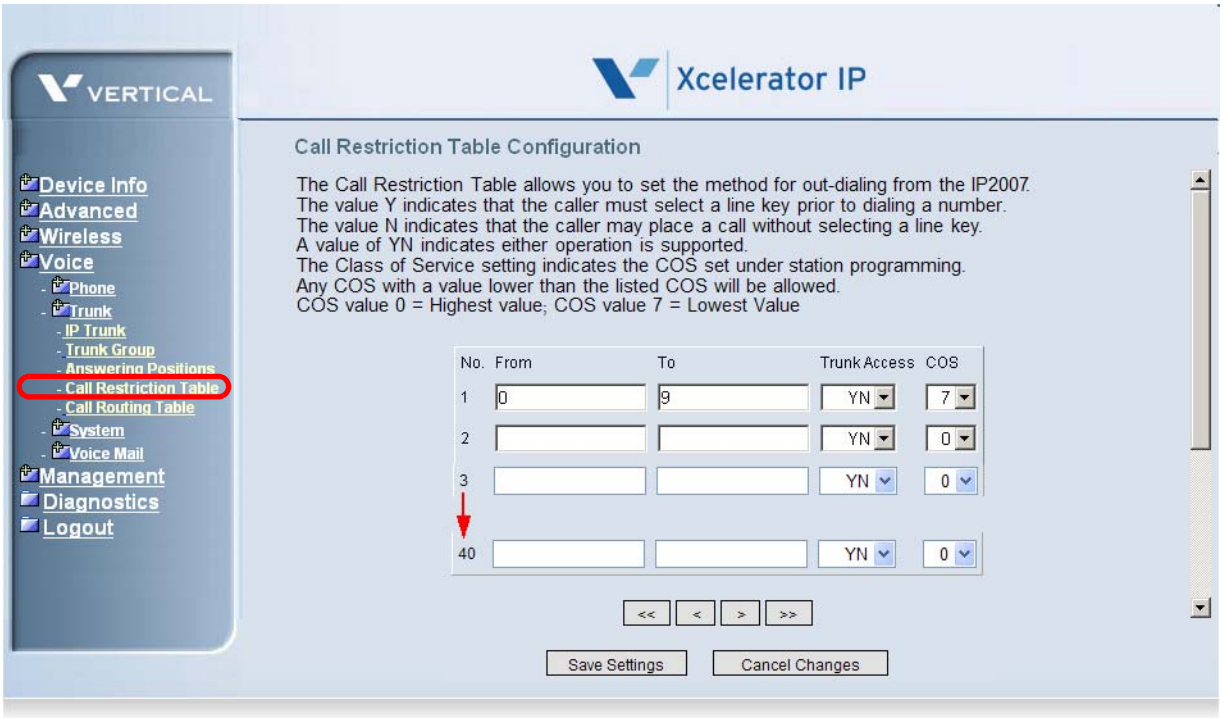
Trunk Access

Xcelerator IP checks the field only when a call matches the associated allowed interval.

- If the field is set to "Y", the entry is valid when the trunk is accessed previously.
- If the field is set to "N", the trunk isn't accessed previously. The trunk will be accessed through the Call Routing Table.
- If the option is set to "YN", the entry is valid no matter the trunk is accessed or not previously.

COS

The Class of Service setting indicates the COS set under station programming. Any COS with a value lower than the listed COS will be allowed. COS value 0 = Highest value, COS value 7 = Lowest Value



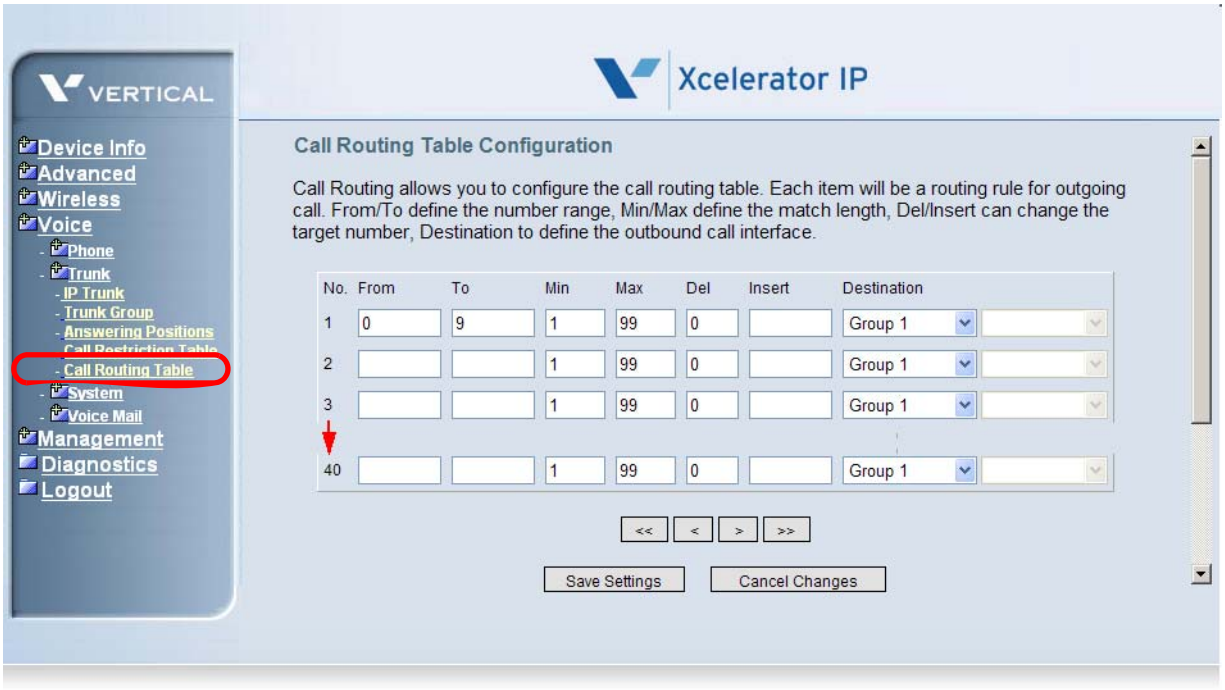
Call Routing Table

The Call Routing Table allows you to configure each entry in the Call Routing Table which contains a routing rule for outgoing calls:

- From/To setting defines the number range
- Min/Max defines the match length
- Del/Insert can change the target number
- Destination defines the outbound call interface trunk

Note	*Each entry in the Call Routing Table must first pass the rules set up in the Call Restriction Table.*

In the Destination field, the dropdown list includes a particular option: "*Xcelerator IP* Expansion". When selecting "*Xcelerator IP* Expansion", the next field is a dropdown list which contains the remote *Xcelerator IP* names list from which a remote site can be chosen to network calls.



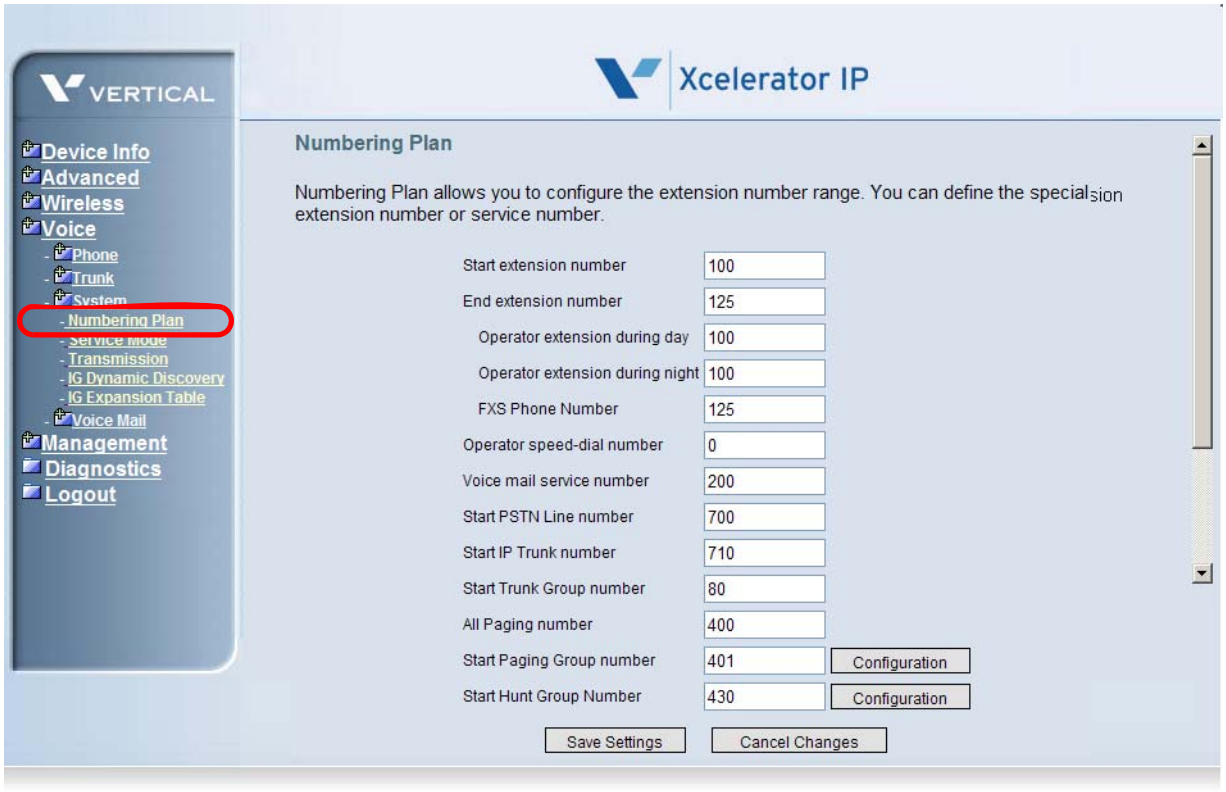
System Menu

The System screen is used to configure the System related parameters. The System section is separated into 5 parts:

- Numbering Plan
- Service Mode
- Transmission
- IG Dynamic Discovery
- IG Expansion Table

Numbering Plan

The Numbering Plan section allows you to configure the extension number range. You can define the special extension numbers in this table.



Start extension number -- starting telephone number for system extensions.

End extension number -- ending telephone number for system extensions. When an IP2007 phone is attached to the *Xcelerator IP*, the system Plug and Play process will allocate the first unused number from this range of station extension numbers.

Operator extension during day -- system operator number. When the "Operator" number is dialed, this extension will be called during the day.

Operator extension during Night -- Night Mode system operator number. If "Operator" is dialed from the Auto Attendant while in night mode, the extension defined in this field will be called.

FXS Phone Number -- Defines the FXS phone number.

Operator speed-dial number -- When the "Operator" is called, the extension identified in this field will be called. The operator extension length is restricted to a single character.

Voice mail service number -- This field defines the extension number of the *Xcelerator IP* internal voice mail system. When this extension is dialed, the user will be directed to their voice mail box and will be able to access their voice mailbox.

Start PSTN Line number -- The *Xcelerator IP* is equipped to support up to three analog PSTN lines. Each line has it's own direct access number which can be dialed to access the trunk directly.

Start IP Trunk number -- The *Xcelerator IP* is equipped to support up to eight VoIP (SIP) connections. Each line has it's own direct access number which can be dialed to access the trunk directly.

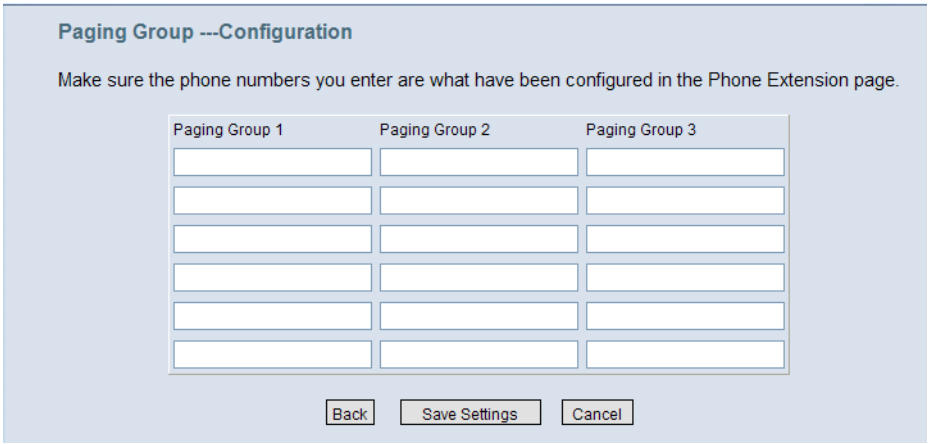
Start Trunk Group number -- The *Xcelerator IP* is equipped to support up to four trunk groups. When the trunk group number is dialed, the Xcelerator IP will seize the first idle trunk in the group and automatically place the call.

All Paging number -- The *Xcelerator IP* is equipped to support internal paging (All Calls Page). All internal IP2007 phones will be paged simultaneously if the All Page number is dialed.

Start Hunt Group Number -- The *Xcelerator IP* is equipped to support up to 4 hunt groups. You can enter up to 24 extension numbers in each hunt group and have each Hunt Group rerouted to Voice Mail or the Auto Attendant. Make sure the phone numbers you enter are the ones you configured in the Phone Extension page. Valid entries are 10-120 seconds in 10-second increments.

Start Paging Group number -- The *Xcelerator IP* is equipped to support up to three paging groups. When accessing a specific Page Group number, the internal IP2007 phones associated with that paging group will be paged simultaneously.

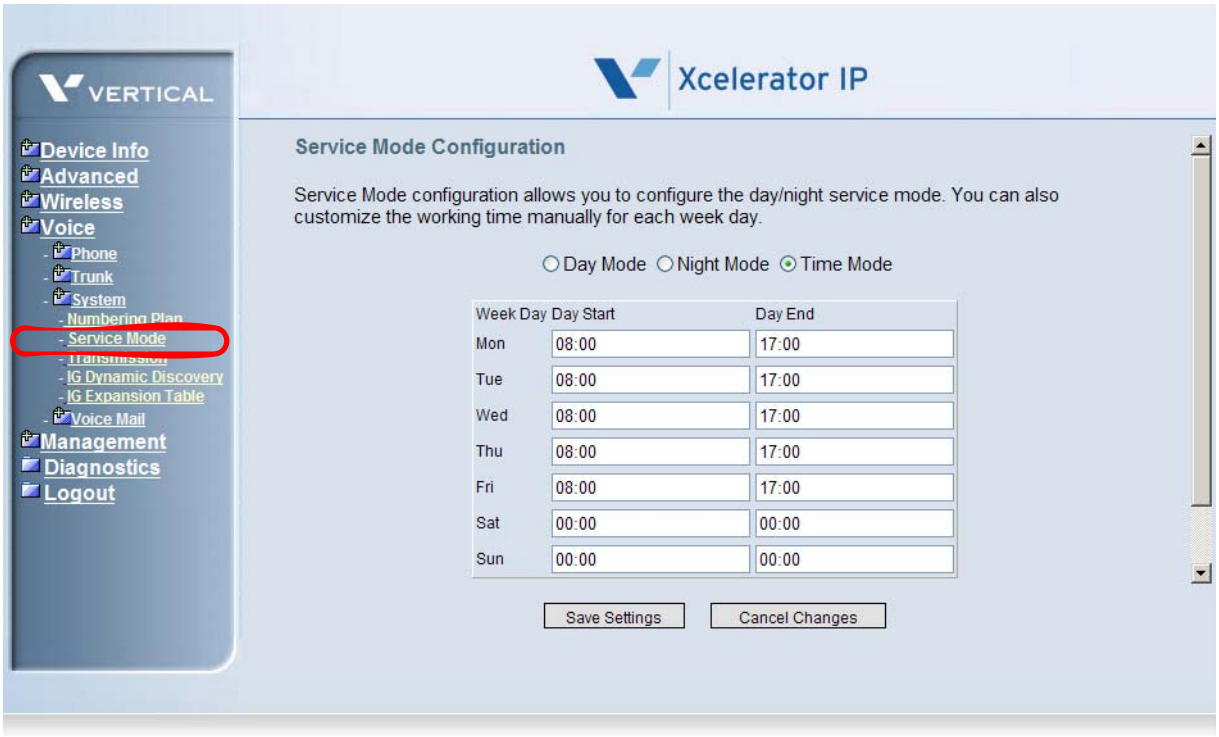
Pressing the "Configuration" box associated with in "Start Paging Group number", will display the Paging Group Configuration screen as shown below:



Service Mode

The Service Mode section allows the user to configure the Day/Night Service Mode. You can also customize the working time (work start and end hours/minutes) manually for each weekday.

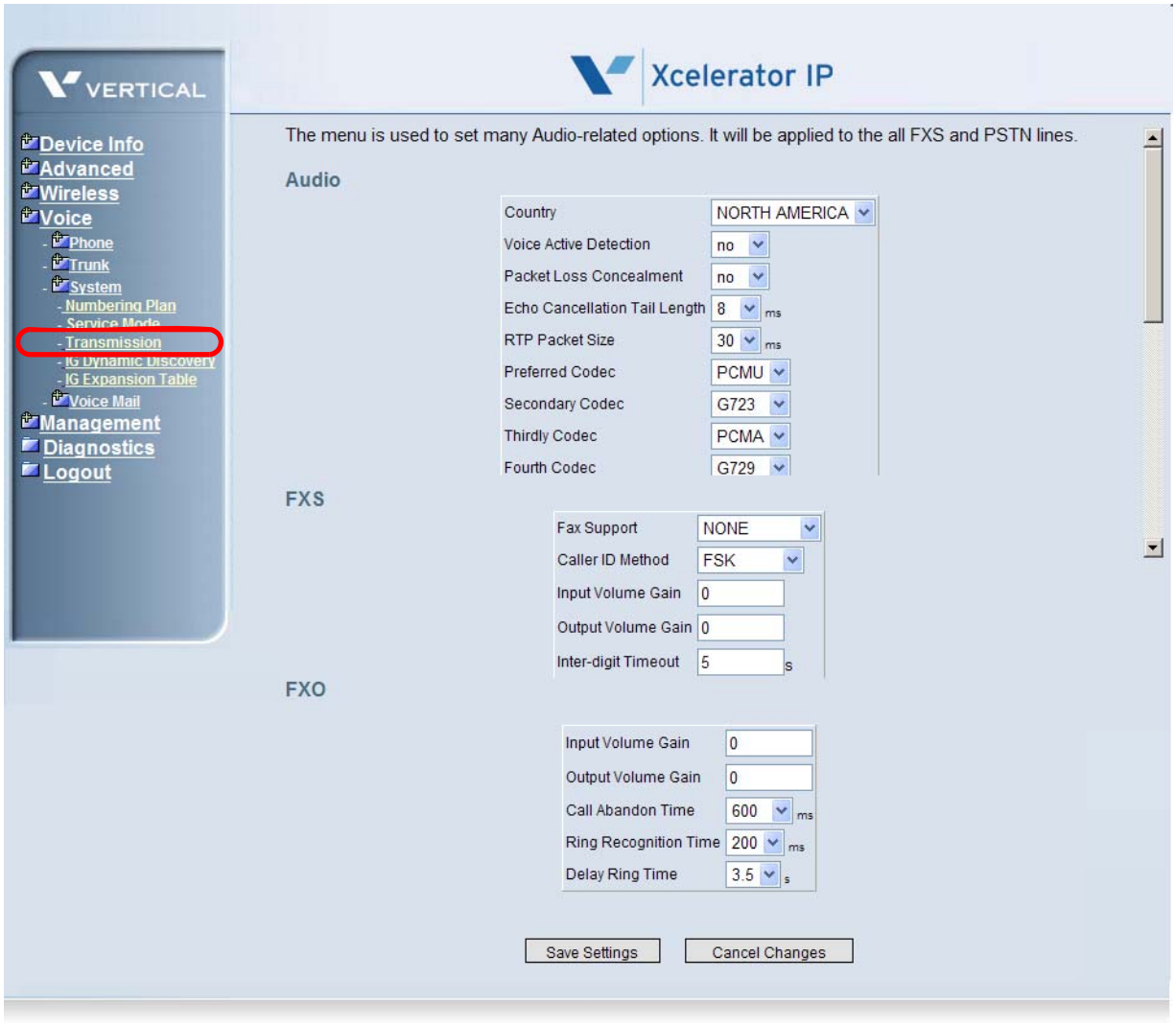
Time Mode allows for the programming of work start and stop times for a specific day of the week. The time is entered in 24-hour format. Valid entries are 00:00 to 23:59 in 1-minute increments.



Transmission

The Transmission section allows the configuration of Audio, FXS, and FXO settings.

- Click the "Save Settings" button to save the new configuration.
- Click "Cancel Changes" button if you wish to cancel the changes.



AUDIO

The Audio settings are used to set the following Audio-related options that will be applied to the FXS and PSTN lines.

Country -- Country setting is used to determine not only the Caller ID detection / transmission method but also ring/tone cadence/frequency.

Voice Active Detection -- VAD is a technique that detects the absence of audio and conserved bandwidth by preventing the transmission of "silence packets" over the network. Normally, this is set to On (enable).

Packet Loss Concealment -- Enable or Disable

Echo Cancellation Tail Length -- Echo cancellation time; 0 value disables the Echo Canceller.

RTP Packet Size -- 10/20/.../60 ms

Codec Priority -- *Xcelerator IP* supports audio CODECS in G711u, G711a, G723, G729a, but only one CODEC can be active at a time. The administrator can set the priority of the CODEC protocols to be used on the system.

FXS - The FXS settings are used to set the following FXS-related options:

Fax Support -- *Xcelerator IP* supports FAX/modem tone detection with G.711 mode.

Call ID Method -- *Xcelerator IP* provides the ability to detect the calling party identification provided by PSTN lines. It also transmits the calling party identification to POTS ports. There are four choices: NONE | DTMF_BR | DTMF_AR |FSK

Input Volume Gain -- value range: -20 to 20. If the value is increased by 1, the actual analog-voice will become louder by 0.5dB. If the value is decreased by 1, the analog voice will become lower by 0.5dB.

Output Volume Gain -- value range: -20 to 20. If the value is increased by 1, the actual analog-voice will become louder by 0.5dB. If the value is decreased by 1, the analog voice will become lower by 0.5dB.

Inter-digit Timeout -- The inter-digit timeout value Its range is from 0 to 30 seconds. This is the elapsed time between dialing digits on the IP2007 before the call will time out and issue re-order tone.

FXO - The FXO settings are used to set the following central office line options:

Input Volume Gain -- value range: -20 to 20

Output Volume Gain -- value range: -20 to 20

Call Abandon Time -- For every PSTN/FXO call, *Xcelerator IP* supports monitoring the call status on trunks. If the remote party hangs up, the ongoing call must be terminated. The PSTN line monitor is accomplished through monitoring the loop-break signal or busy tone. The value range is: 100/200/…/1000 ms.

Ring Recognition Time -- The Ring Recognition timer determines the minimum ring duration recognized as a valid incoming ring on a PSTN port. Shorter ring signals are ignored. The timer range is 200ms to 60ms in 40ms increments.

Delay Ring Time -- The Delay Ring timer allows the Central Office to send ICLID before the call is answered. Once the timer expires, the programmed extensions will ring and the ICLID number will be sent to the ringing extensions. The timer range is 3 to 6 seconds in 0.5 second increments.

CO Line Flash -- *3 will emulate a Centrex CO line flash (switch hook flash).

Xcelerator IP Dynamic Discovery

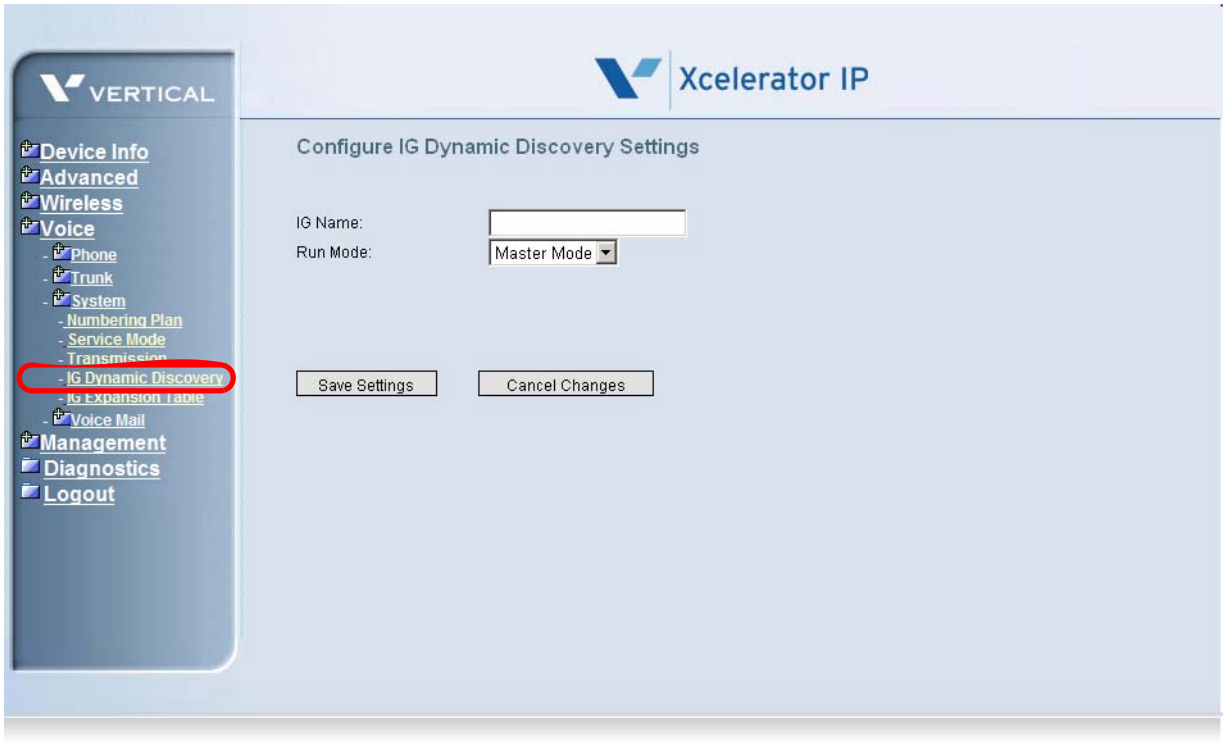
The *Xcelerator IP* Dynamic Discovery section allows you to configure *Xcelerator IP* Network settings.

Xcelerator IP Name -- The name of the *Xcelerator IP* system.

Run Mode -- The mode that *Xcelerator IP* is running. *Xcelerator IP* can run in Master Mode or Slave Mode.

MASTER MODE -- When *Xcelerator IP* is running in master mode, it maintains an *Xcelerator IP* list table. When the master finds that some slave *Xcelerator IP* has changed its name or IP address, it will broadcast this new information to all other slave *Xcelerator IP*'s in this list and let them update their own *Xcelerator IP* list table.

SLAVE MODE -- When *Xcelerator IP* is running in slave mode, the master *Xcelerator IP* IP address should be configured. When it's name or IP address is changed, it will inform the master *Xcelerator IP*. And the master *Xcelerator IP* will let notify all other slave *Xcelerator IP* of this change.



Xcelerator IP Expansion Table

The *Xcelerator IP* Expansion Table displays a list of all interconnected *Xcelerator IP* systems. The *Xcelerator IP* Expansion Table list can be obtained through *Xcelerator IP* Dynamic Discovery. The *Xcelerator IP* Expansion Table also allows you to define the specific *Xcelerator IP* that calls will be routed to.

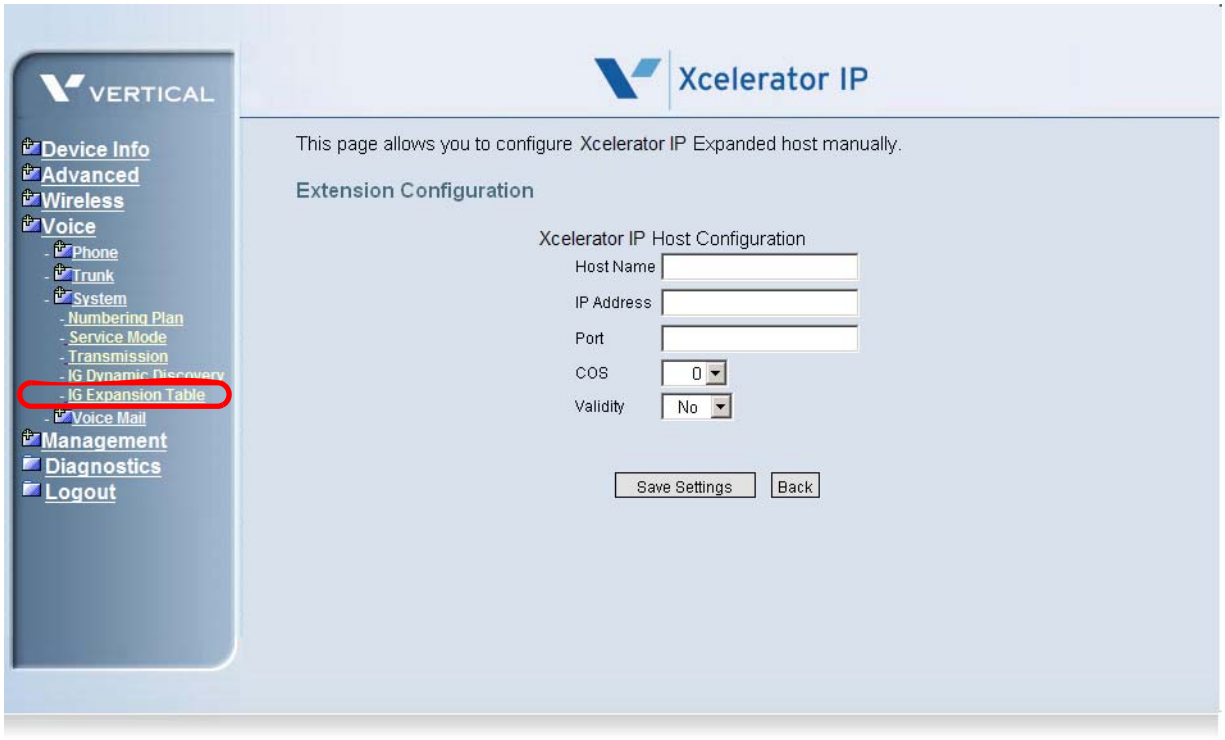
Xcelerator IP Host Name -- The remote *Xcelerator IP* system name.

IP Address -- The remote *Xcelerator IP* IP address.

Port -- The remote *Xcelerator IP* SIP port.

COS -- The remote *Xcelerator IP* Class of Service.

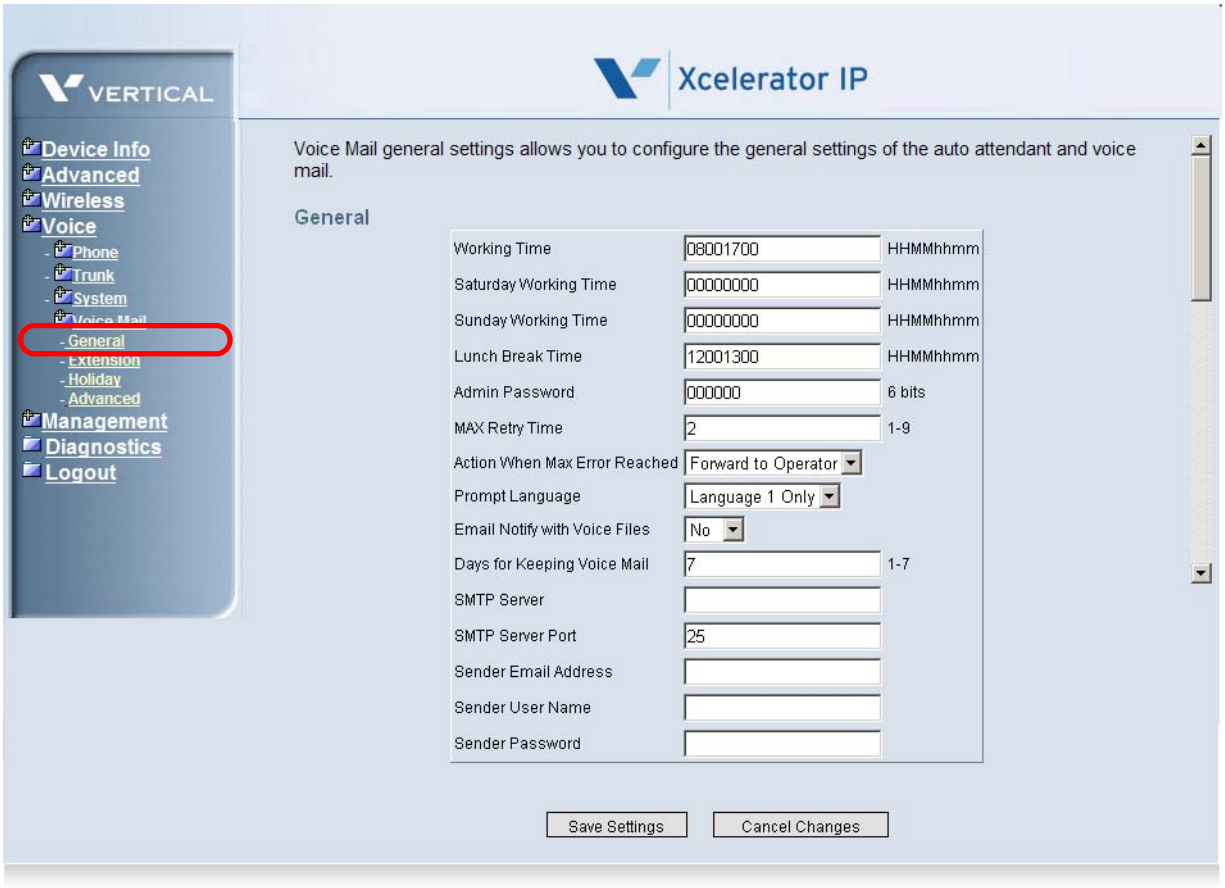
Valid -- If this setting is set to "N", all calls will be rejected from the specified remote *Xcelerator IP* site.



Voice Mail Menu

Xcelerator IP provides a built-in Auto Attendant and Voice Mail System. Programming of the Voice Mail is segmented into four sections:

- General
- Extension
- Holiday
- Advanced



General

The General section allows you to configure the general setting for the Auto Attendant and Voice Mail.

Working Time -- Defines Weekday working hours. If a weekday is a holiday and the Holiday greeting or after hours greeting is selected, the working time for that day needs to be set to 00000000.

Saturday Working Time -- Defines Saturday working hours. If night mode is used for Saturdays, working time is set to 00000000 00000000 means Saturday Holiday.

Sunday Working Time -- Defines Sunday working hours. If night mode is used for Sundays, working time is set to 00000000 00000000 means Sunday Holiday.

Lunch Break Time -- Defines time frame when a lunch greeting can be played.

Admin Password -- Administrator password setting.

Max Retry Time -- Maximum number of user attempts to access the system voice mail before access is denied. Value range is 1 through 9.

Action When Max Error Reached -- This field defines the action taken by the *Xcelerator IP* when the MAX Retry time threshold has been reached. Options are

Prompt Language -- The Automated Attendant can support two language settings. This section allows the administrator to set the primary and secondary languages.

Email Notify with Voice Files -- This setting activates Unified Messaging which allows a voice message to be sent as a WAV file attachment to an email box.

Days for Keeping Voice Mail -- Number of days that voice messages are stored on the *Xcelerator IP* before being overwritten. The value range is 1 to 7 days.

SMTP Server -- SMTP Mail Server name or IP address. If the server name is used, there must be a DNS server on the network to perform the name-IP address resolution.

SMTP Server Port -- SMTP Mail Server port. The default is 25.

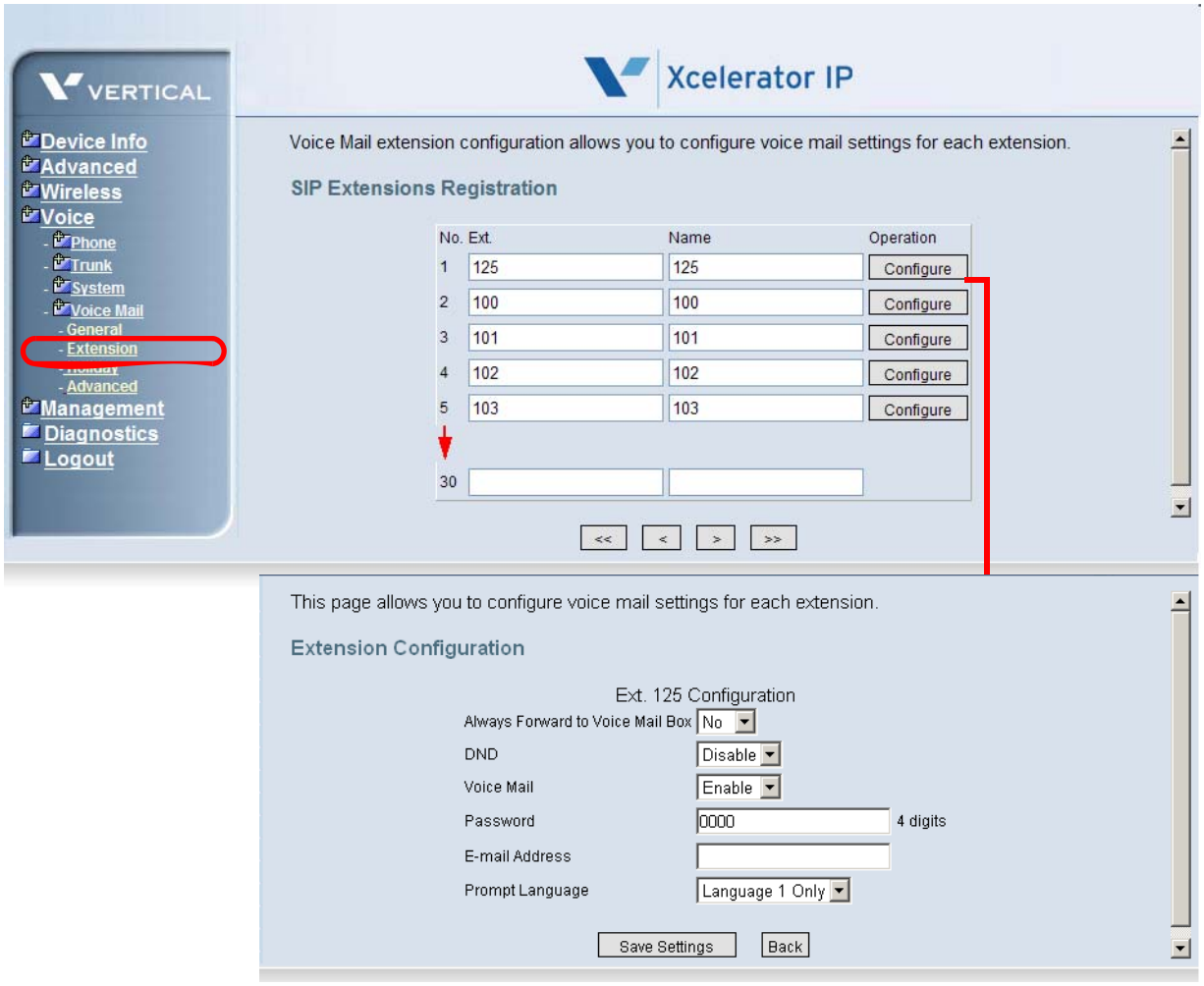
Sender Email Address -- Email Address of Sender. This entry would usually be the address of the network administrator; such as, "admin@xyz.com"

Sender User Name -- User Name of Sender's Email. This entry is optional and would most likely be the network admin user name.

Sender Password -- Password of Sender's Email.

Extension

After pressing the "Configure" button, the Extension Voice Mail Configuration screen for that extension will be displayed as shown below:



The following items can be set up in the Voice Mail configuration area:

Always Forward to Voice Mail Box -- Sends all outside calls to voice mail for the extension (Auto-Attendant).

DND -- Enables/Disables Do Not Disturb feature for the extension (Auto-Attendant).

Voice Mail -- Enables/Disables the Voice Mail function for the extension (Auto-Attendant).

Password -- Sets the Password for the voice mailbox of the extension.

E-mail Address -- Sets the Phone user's E-mail Address.

Prompt Language -- Provides a choice of languages for the prompts at the station. English is the default as Language 1.

Note	*The Total Recording Message Time for one extension depends on how many extensions are connected to the Xcelerator IP. (See current members in the Phone Extension Table.) The current Xcelerator IP configuration allows 240 minutes of recording time.* *Total Recording Message Time for One Extension = (240 minutes) divided by (Total Members)*

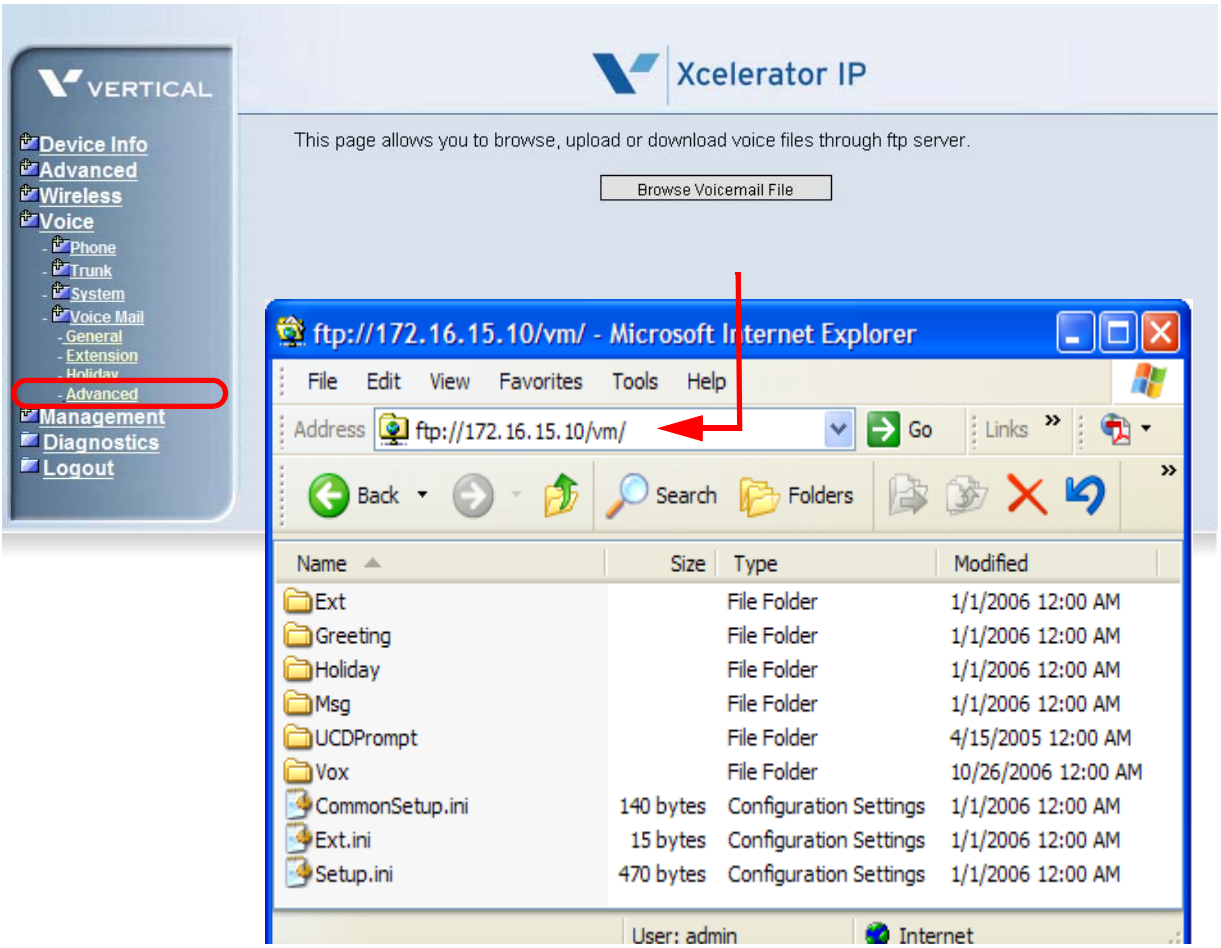
Holiday

The Holiday settings allow the administrator to configure the holiday or special off-duty days for the *Xcelerator IP*. The Holiday setting has a higher value which allows it to overwrite the normal settings.

Click the buttons under the table to choose additional pages.

Advanced

The Advanced Settings allow the administrator to browse, upload or download voice files via FTP server.



Management Settings

The system administrator can perform the following functions to manage the configurations, events, and software update of the *Xcelerator IP*.

Settings

Log

Time Setting

- Internet Time
- Day Light Save

Access Control

- Web Port
- Services
- IP Addresses
- Password

Update

Save&Reboot

Settings Menu

The System Administrator can perform *Xcelerator IP* settings (database) backup, restore, and update from this location. The settings can be saved from *Xcelerator IP* to a local PC. The saved setting file can also be loaded from a PC to the *Xcelerator IP*. These functions can help the system administrator to manage multiple *Xcelerator IP*s efficiently. Restore Default will set the *Xcelerator IP* with the factory default configuration.

Settings -- Backup

Click "Save Settings"saves your *Xcelerator IP* configurations to a file on your PC.

Tools -- Restore Default Settings

Click "Restore Default Settings" to restore the factory default settings.

Tools -- Update Settings

Click "Browse" to locate the setting file saved on the Local PC. Then, "Update Settings" would apply the settings to the Xcelerator IP according to the configuration file.

Log Menu

The Log Setting allows the System Administrator to view the System Log and configure the System Log options. Click "View System Log" to view the System Log. Click "Configure System Log" to configure the System Log options. When configuring the System Log options, you can select from 8 Log Levels and 8 Display Levels:

0 - Emergency	4 - Warning
1 - Alert	5 - Notice
2 - Critical	6 - Informational
3 - Error	7 - Debugging

The Log Level sets the logging level that is applied to *Xcelerator IP*. The Display Level displays only the log message requested. As a result, is a subset of the retrieved data from the total log message which was logged according to the setting of the Log Level. If "Mode" is set to "Remote" or "Both", the log messages would be sent to the specified UDP port of the specified log server. By clicking on the "Save Settings" button you can save the new configuration. Clicking on the "Cancel Changes" button cancels the changes.

Registered Phone Menu

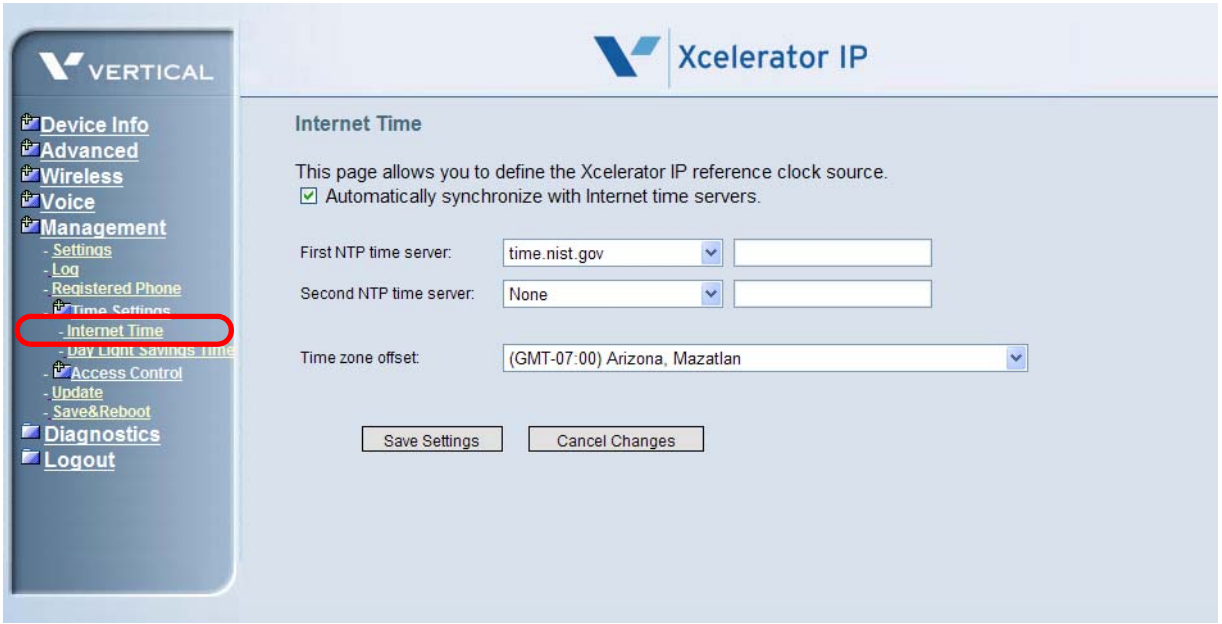
The Registered Phone section lists all the phones registered to the *Xcelerator IP* and provides the link to access the phone's web page. By clicking on the link associated with a phone, the administrator will be logged onto the web page of the specific phone.

Time Settings

The Time Settings section allows the System Administrator to configure the *Xcelerator IP* to automatically synchronize with the NTP time server.

Internet Time

The Internet Time section allows the System Administrator to configure the *Xcelerator IP* system time and Daylight Saving Time.



Day Light Savings Time

The Daylight Savings Time page allows you to configure the Daylight Saving Time (DST) which includes support for auto adjustment of daylight saving time. By clicking on the "Save Settings" button, the DST configuration will be saved to the *Xcelerator IP*. Clicking the "Cancel Changes" button cancels any changes.

- Default International DST Rule obeys the international standard rule.
- Manual DST Rule allows you to define your own Daylight Savings Time Rule.

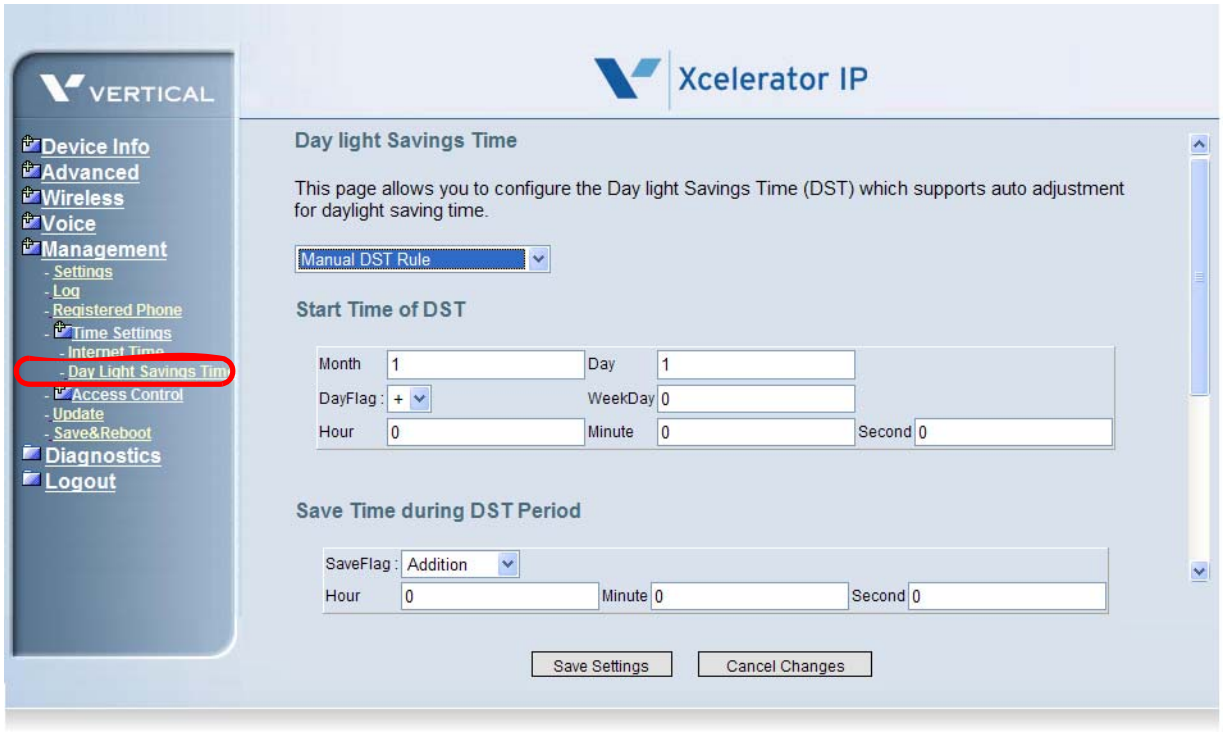
Start Time of DST -- Daylight Savings Time start date and time.

If "Weekday" is set to "0", the date to start Daylight Savings is the date given in the 'Month" and "Day" setting. If "Weekday" is set to other than "0", Daylight Savings Time will start on the "Weekday" after the given date.

End Time of DST -- Daylight Savings Time start date and time.

If "Weekday" is set to "0", the date to end Daylight Savings is the date given in the 'Month" and "Day" setting. If "Weekday" is set to other than "0", Daylight Savings Time will end on the "Weekday" after the given date.

Save Time during DST Period -- The time (in hours, minutes, and seconds) to add to the current time during daylight saving period.

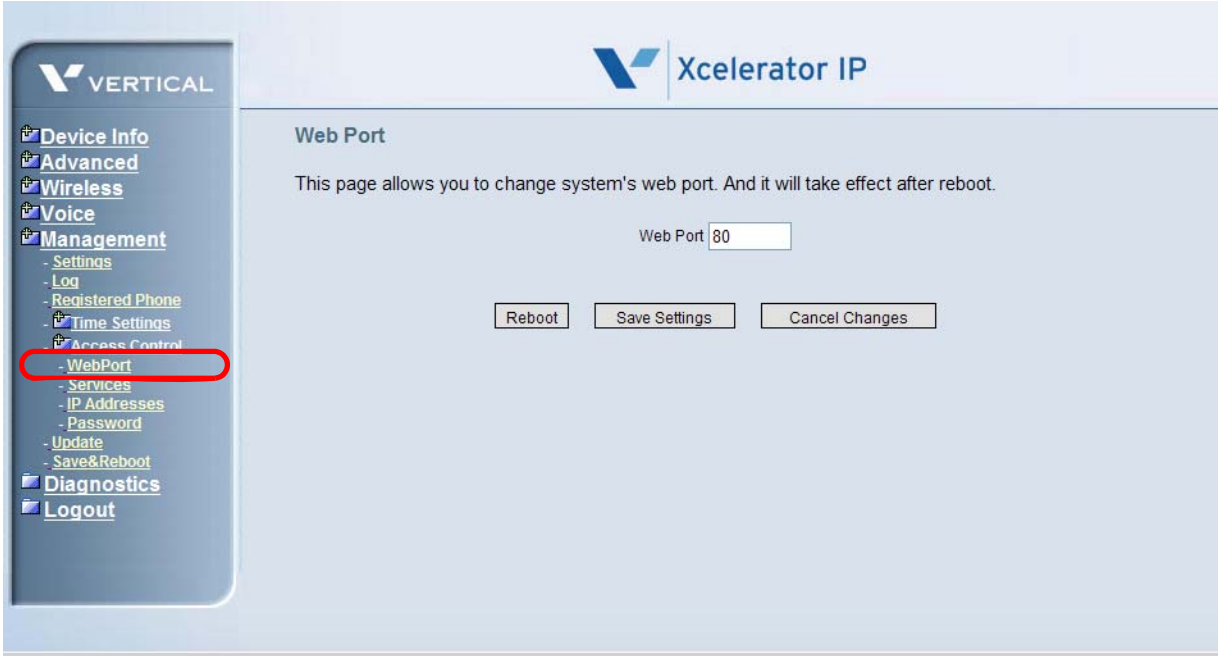


Access Control Menu

The Access Control settings allow the System Administrator to configure the Web Port, Service Control List, IP Address Access Control mode and password for user 'admin'.

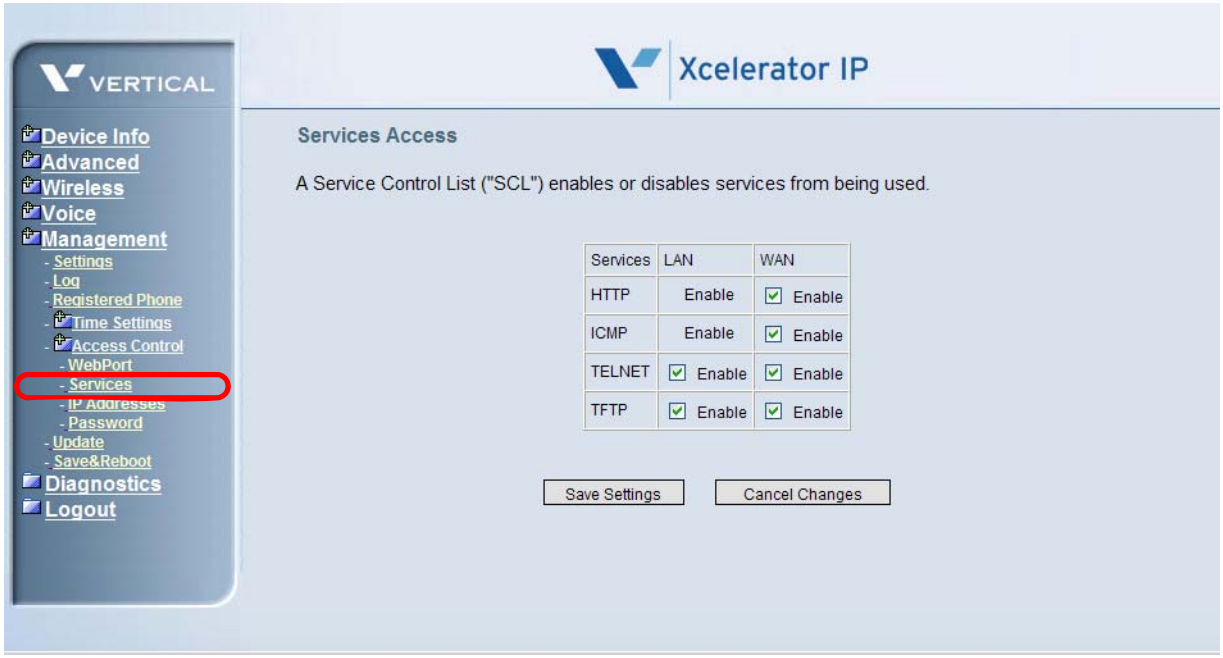
Web Port

This page allows you to change the number of the *Xcelerator IP* web port. A change will take effect after a system reboot. The default for the Web Port is 80.



Services

Clicking on the Enable box for any of the services listed will activate that service. HTTP, ICMP, Telnet, and TFTP are supported on the *Xcelerator IP*.



IP Addresses

The IP Address Access Control mode, if enabled, *Xcelerator IP* will permit access to local management services from IP addresses contained in the Access Control List. If the Access Control mode is disabled, the system will not validate IP addresses from incoming packets.

Password

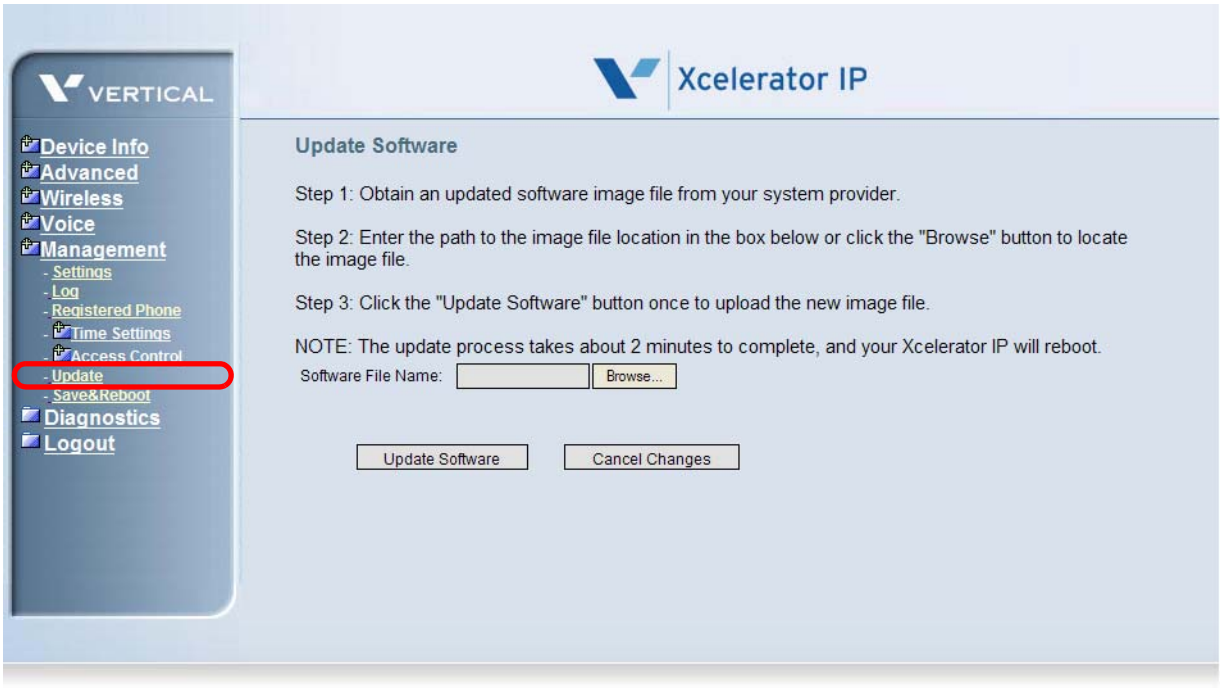
The Password page allows the System Administrator to define the passwords for the administrator. The user Administrator has unrestricted access to change and view configuration of the *Xcelerator IP* Router.

The "Password" field is used to enter the password, up to 16 alpha characters are allowed (no spaces).

Update Menu

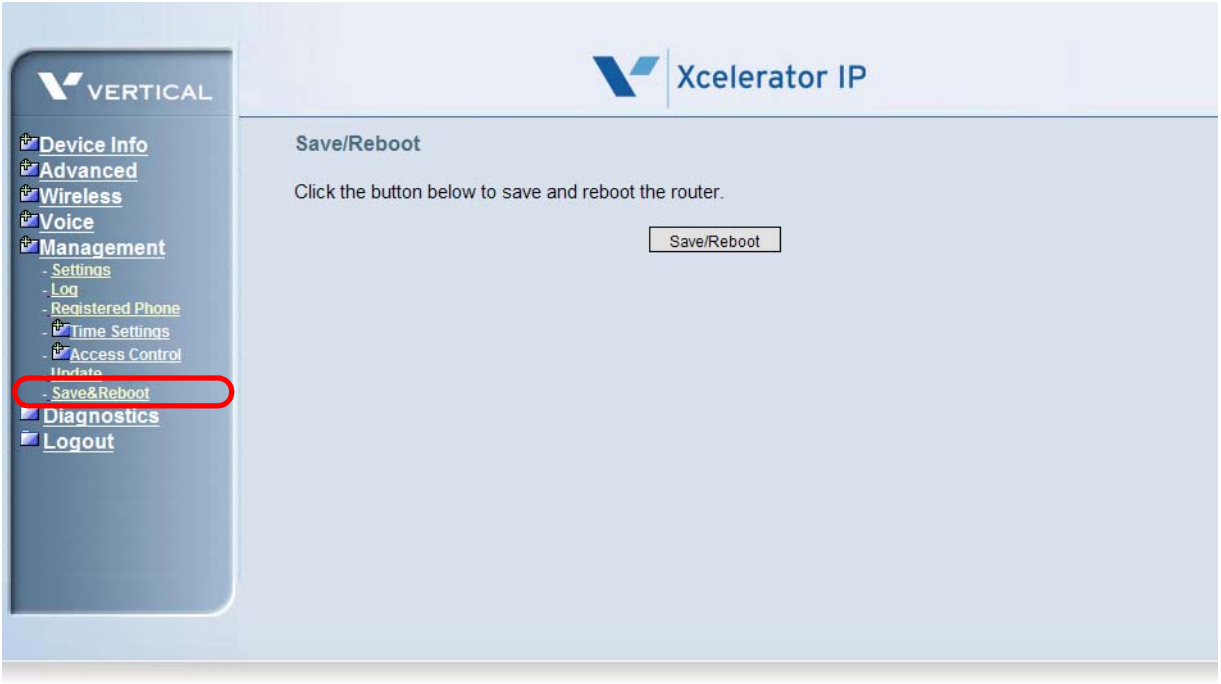
New software can be uploaded from either a local or a remote PC. Clicking the "Browse" button will allow the System Administrator to locate the new software image file in their PC. Then, by clicking "Update Software" the System Administrator will be able to process the software update. Clicking on the "Cancel Changes" button cancels the software update.

Note	*The software update process takes about 2 minutes to complete, and your the Xcelerator IP Router will automatically reboot at the end of the software update.*



Save & Reboot Menu

Click "Save/Reboot" to save all changes and reboot the *Xcelerator IP*. The *Xcelerator IP* will automatically save any configuration changes that were made prior to the reboot, and any modified settings will take effect after the *Xcelerator IP* system reboot.

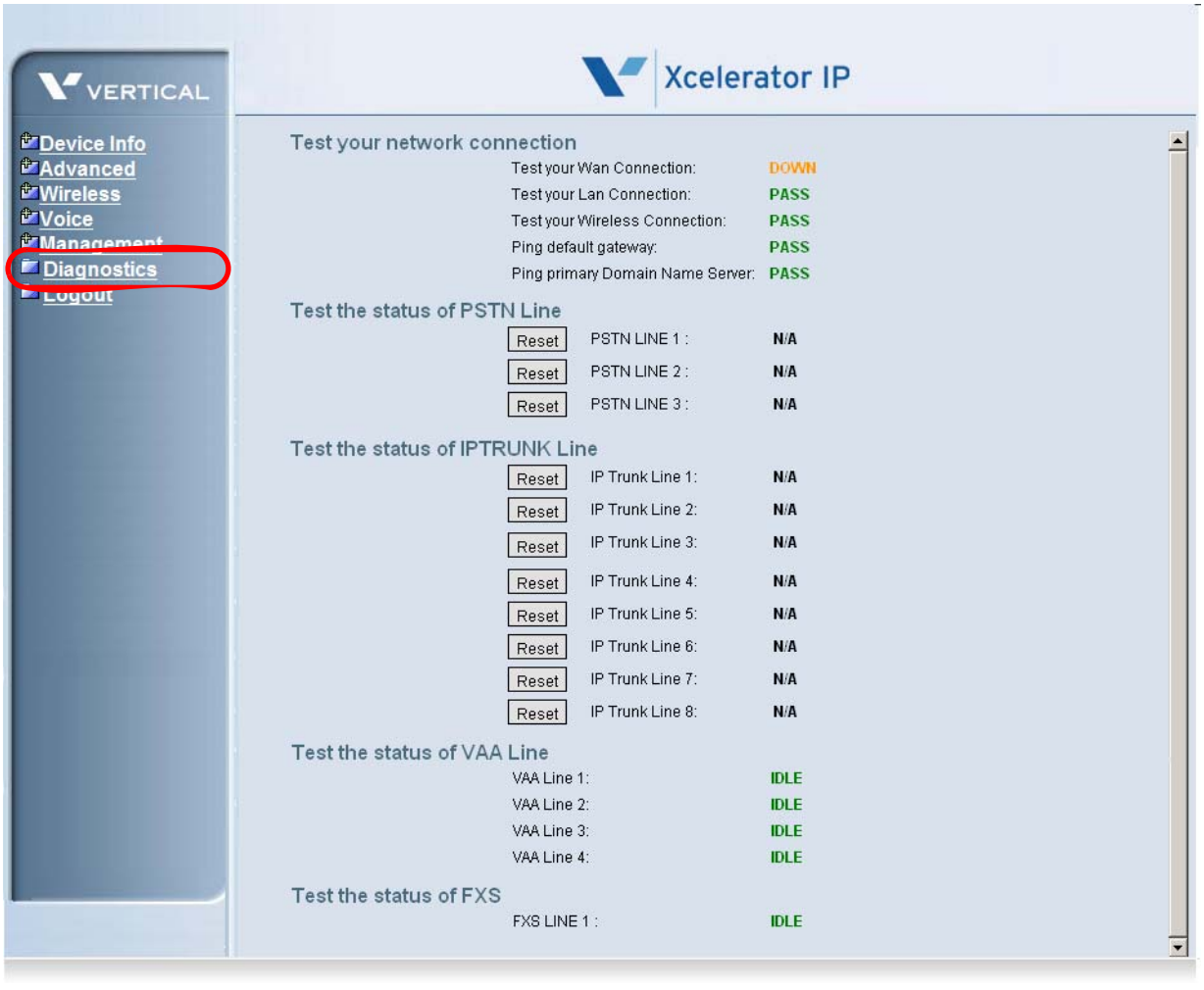


Diagnostic Information

This page provides a user with the following information:

- network connection information on the net
- status of *Xcelerator IP* PSTN Line
- status of *Xcelerator IP* IP Trunk Line
- status of *Xcelerator IP* VAA Line
- status of *Xcelerator IP* FXS
- status of *Xcelerator IP* Extension phones

Clicking the Reset button will allow you to release the selected trunk line or reset a blocked one.



1. Test Your Network Connection displays the current status of the WAN port, LAN connection, and Wireless LAN connection. The following status indicators are provided:
   - PASS -- Connected and operating normally
   - FAIL -- Connection failed
   - DOWN -- No communication on the Wan or LAN link
2. Test the Status of PSTN Line / IP Trunk Line / VAA Line / FXS displays the current status of the PSTN Trunk interface, the IP Trunk interface, Auto-Attendant ports, and FXS port. The following status indicators are provided:
   - FAILED -- Connection or Registration failure
   - IDLE -- Indicates the specific resource is in an idle state
   - N/A -- Indicates the specific resource the line is not available
   - Busy -- Indicates the specific resource is in use
3. Registered Extension Phone in LAN or WAN displays the physical registration of the attached IP2007 phones.
   - LAN -- indicates the IP2007 is registered through a LAN port
   - WAN -- indicates the IP2007 is registered through the WAN port

A System Prompts & Recordings

The System Prompts & Recordings appendix is an Administrator tool that will assist you with the following operations:

- Verifying and referring to system preset voice prompts
- Setting up a second language for voice prompts (Localization)
- Recording new voice prompts

Xcelerator IP Voice Prompts

The *Xcelerator IP* voice files can be configured using one of two methods: 1) via the telephone user interface, or 2) via prerecorded .vox files that are loaded on the *Xcelerator IP* by the System Administrator. Both methods are described below.

Localization - Using a Second Language

The following tables and charts are provided to assist with localization for *Xcelerator IP*. The file chart provides the text of each of the recorded prompts and messages on *Xcelerator IP*. The administrator will use these files to provide the correct prompts when translating from English to a second language. The filename will need to have the leading digit changed to a 2 to indicate to the *Xcelerator IP* that this is a second language file.

Preset Voice Prompts

File #	Contents
10001	If you know your party's extension, you may dial it at anytime or press zero for the operator.
10002	Our office is currently closed. If you know your party's extension you may dial it at any time or press zero to leave a message in our general mailbox.
10003	Our office is currently closed for lunch. If you know your party's extension you may dial it at any time or press zero to leave a message in our general mailbox.
10004	Our office is currently closed for the holiday. If you know your party's extension you may dial it at any time or press zero to leave a message in our general mailbox.
10051	Please dial your number now. When you are finished, press pound (#).
10097	This mailbox is full. No more messages can be accepted at this time. Goodbye.
10102	The number you dialed is invalid. Please hold while your call is transferred to the operator.
10103	The number you dialed is invalid.
10104	Please check your number and dial again.
10106	The extension you dialed is invalid. Please dial again.
10107	The extension you dialed is invalid. Please check the number and dial again.
10201	Please hold while your call is being transferred.
10205	The extension you dialed is currently busy, press star (*) to wait.
10206	The extension you dialed is not answering, press star (*) to try another extension.
10207	To leave a message, press pound (#).
10210	Press zero to reach an operator.
10212	The extension you dialed is busy. Press 1 to hold.
10221	The extension you dialed is unavailable. Please dial another extension or press zero to reach the operator.

File #	Contents
10301	Please leave a message after the tone. Press pound when you have finished recording.
10302	Your message has been recorded.
10303	If you are satisfied with your message, press 1. To listen to your message, press 2. To re-record your message, press 3. To cancel recording, press 4. To delete your message, press pound (#).
10304	Your message has been recorded.
10305	Playback completed.
10306	Thank you for calling. Your call will now be disconnected.
10501	Please enter your mailbox number.
10502	The mailbox number you dialed is invalid. Please try again.
10503	The mailbox you dialed is not in service. Please try again.
10504	Please enter your password.
10505	The password you entered is incorrect. Please try again.
10506	You have exceeded the maximum attempts to access this mailbox. You will now be disconnected.
10507	To listen to your messages, press 1. To change your password, press 2. To record your personal greeting, press 3. To have your calls forwarded directly to your mailbox, press 4.
10510	No message has been recorded.
10511	You have
10512	Voice messages
10514	To listen to voice messages, press 1. To delete all messages, press 2. When finished, press pound (#).
10516	To replay the message, press 1. To delete this message, press 2. To skip to the next message, press 3. To forward this message to another mailbox, press 4. When finished press pound (#).
10517	You have retrieved all messages.
10521	Your message has been forwarded.
10522	Your message did not forward.
10523	Deleting messages, please wait.
10524	All messages have been deleted.
10526	Please enter your new four digit mailbox password.
10527	You have entered _____.

File #	Contents
10528	If this entry is correct, press 1.To re-enter, press 2.
10529	Your password has been changed.
10530	Your password has NOT been changed.
10531	To listen to the current greeting, press 1. To record a new greeting, press 2. To delete the current greeting, press 3. When finished, press pound (#).
10532	You have not recorded a personal greeting.
10533	At the tone, please record your greeting. When finished, press pound (#).
10534	Recording finished.
10537	Your greeting has been deleted.
10538	Your greeting has NOT been deleted.
10547	Mailbox setup is complete.
10549	Your message has been deleted.
10550	Your message has NOT been deleted.
10561	Do you wish to use your extension as your mailbox number? Press 1 for “yes”. Press 2 for “no”. When finished, press pound (#).
10580	The mailbox you are trying to access is currently in use.
10601	Start recording at the tone. When finished, press pound (#).
19001	Please enter the administrator password.
19011	Recording the first language greeting, press 1. Recording the second language greeting, press 2. When you have finished, press pound (#).
19012	To record standard greeting, press 1. To record after hours greeting, press 2. To record out to lunch greeting, press 3. To record holiday greeting, press 4. When finished, press pound (#).
19013	To play, press 1. To record, press 2. When finished, press pound (#).
19015	There is no greeting recorded.
19073	The extension number you dialed is invalid.
19200	Please enter a five digit code to name this voice file. When finished, press pound (#).
19201	The code you entered is _____.
91000	Language 1, press 1. Language 2, press 2.

File #	Contents
10870	Zero
10871	One
10872	Two
10873	Three
10874	Four
10875	Five
10876	Six
10877	Seven
10878	Eight
10879	Nine
10880	Ten
10881	Eleven
10882	Twelve
10883	Thirteen
10884	Fourteen
10885	Fifteen
10886	Sixteen
10887	Seventeen
10888	Eighteen
10889	Nineteen
10890	Twenty
10891	Thirty
10892	Forty
10893	Fifty
10894	Sixty
10895	Seventy
10896	Eighty
10897	Ninety

Recording Voice Prompts

There are two ways to change the *Xcelerator IP* voice prompts: 1) using an IP2007 Phone or 2) using an TFTP Server.

Via IP Phone Web-based (configuration utility)

1. Using an *Xcelerator IP* phone, dial the Voice Mail Directory Number ("100" at default).
2. Type in the password of the extension. ("0000" at default).
3. Press the "*" key to enter the Administrator mode.
4. Type in the Voice Mail Administrator password ("000000" at default).
5. Listen to the prompt and perform one of the following:
   a. Press [1] to record the 1st language main system greetings (File **1**0001 - **1**0004).

-or-

   b. Press [2] to record the 2nd language main system greetings (File **2**0001 - **2**0004).

-or-

   c. Press [3] and type the desired five-digit file number to record the new prompt/ greeting directly into the respective file name.

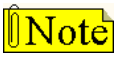
	IMPORTANT -- The individual voice files MUST be saved in the following format: *- Dialogic vox* *- u-law mono* *- 8Khz* *For additional support, contact your VERTICAL authorized dealer.*

Via FTP Server

1. All prompt/greeting files are stored and saved in the VOX folder in PCM u-law format. You can record your prompt in the WAV format first and then convert to PCM u-law. There are numerous free audio conversion applications available on the Internet.
2. Log in to the *Xcelerator IP* embedded FTP server: ftp://*Xcelerator IP* IP address.

   -or-

   From the *Xcelerator IP* web interface, select Voice > Voice Mail > Advanced, then press the "Browser Voicemail File" button.
3. Save the new prompt to the VOX folder with the same file number to replace the existing prompt.

	*BACKUP Files -- It is recommended that you save all original prompts to another file directory before updating the voice files.*

B Numbering Plan

The Numbering Plan appendix provides a list of the default values for the VERTICAL *Xcelerator IP* system.

Xcelerator IP Default Values

To access the system default values ... log in to the *Xcelerator IP* web interface and select the following menus: Voice > System > Numbering Plan.

Start Extension Number	100
End Extension Number	125
Operator Extension During Day	100
Operator Extension During Night	100
FXS Phone Number	125
Operator Speed Dial Number	0
Voice Mail Service Number	200
Start PSTN Line Number	700
Start IP Trunk Number	710
Start Trunk Group Number	80
All Paging Number	400
Start Paging Group Number (Range 401 -403)	401
Start Hunt Group Number (Range 430 -433)	430
Start Speed Dial Number (Range 600 -699)	600

Index

A

Access Control
- Phone [3-3]
- System [3-3]

Alphanumeric Display [4-4]
Answer a Call [4-4]
Answering Position [3-3]
Auto
- Answer [4-4]
- Attendant [3-3]

B

Basic Call [4-4]
Busy Call Forward [4-5]

C

Call
- Abandon [3-4]
- Attendant [3-4]
- Log [4-6]
- Operator [3-4]
- Routing [3-4]
- Waiting [4-6]

Call Forward via Auto Attendant [4-5]
Caller ID [3-5], [4-6]
Calls - Placing [4-10]
Cbeyond Beyond Voice Connect Service [5-28]
Class Of Service [3-5]
Conference [4-7]
COS [3-5]
COS Following [4-7]

D

Day & Night Service Mode [3-5]
Daylight Saving Time [3-5]
Default Set [3-5]
Direct Call Forward [4-5]
Direct Call Forward to VM [4-5]
Direct Inward System Access [3-6]
DISA [3-6]
Distinctive Ringing [4-7]
DND [4-8]
Do Not Disturb [4-8]
Dynamic DNS [3-6]

E

Extension Password [3-6]

F

Fax/Modem [3-6]
Feature Key Programming [3-6], [4-8]
Flash - Analog Port [3-6]

G

Gateway to Gateway [3-7]

H

Hardware Components [2-3]
Hold a Call [4-8]
Hold/Resume/Navigation in Calls [4-8]

I

Interface Support [1-3]
IP Trunk [3-7]

L

Last Number Redial [4-9]
LCD & Interactive Buttons [4-9]
Line Group Assignment [3-7]
LNR [4-9]

M

Make an Outside Call [3-7]
Message Waiting Indication [3-7]
Multi-Line Appearance [3-8]
Music On Hold [3-8]
Mute [4-9]

N

Navigation in Calls [4-8]
No Answer Call Forward [4-5]
Numbering Plan [3-8]
Numbering Plan, default system values [B-1]

O

On Hook Dialing [4-9]

P

Page Allow/Deny [4-9]
Paging [3-8]
Phone - Web Page Access Control [3-3]
Phone Book [4-10]
Place a Call [4-10]
Plug & Play [3-8]
Polarity Reversal Detection [3-8]
PSTN Backup [3-9]

R

Register to a Server [4-10]
Registration [3-9]
Remote Management [3-9]
Resume a Held Call [4-8]
Router
    Connections [2-4]
    LEDs [2-4]

S

Setup Wizard [2-6]
Speakerphone/Headset/Handset [4-11]
Speed Dial [4-11]
System
    Default Values [B-3]
    Specifications [2-3]
    Time & Date [3-9]
    Web Page Access Control [3-3]

T

Terminal Support [1-3]
Toll Restriction [3-9]
Transfer [3-9], [4-11]
    Blind Transfer [4-11]
    Supervised Transfer [4-12]
Trunk Group [3-10]

V

Voice Mail [3-3]
Voice Mail Access [4-12]
Voice Prompts [A-3]
    recording [A-7]
Volume Control [4-12]

W

Wizard Setup [3-10]